WEST RIDING COUNTY COUNCIL.

TENTH

ANNUAL REPORT

OF THE

County Medical Officer,

1898.

Including an Abstract of the Annual Reports of the Medical Officers of Health for the Sanitary Districts within the Administrative County.

Printed by Order of the West Riding Sanitary Committee, 11th September, 1899.

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INDEX OF SUBJECTS.

NOTE.—The Roman numerals refer to the Tables folded in at the end.

SUMMARY shewing the principal general items of the Vital Statistics, etc., for 1898, contained in this Report.

Area of the Administrative County ...	...	1,700,783 acres.
Population, estimated to middle of 1898	...	1,472,338 persons
Number of Sanitary Districts (1898) ...		135 Urban, 30 Rural = 165

	Year 1898.		Average of previous five years.
Birth Rate	**29·7**	...	30·5
Death Rate	**17·7**	...	17·6
Zymotic Death Rate	**2·21**	...	1·98
Phthisis Death Rate	**1·3**	...	1·3
Respiratory Death Rate	**3·3**	...	3·4
Infantile Mortality, *i.e.*, Number of deaths per 1000 births.	**165**	...	154

WEST RIDING COUNTY COUNCIL.

SUMMARY OF THE WORK OF THE COUNTY MEDICAL OFFICER'S DEPARTMENT.

In accordance with a standing instruction of the West Riding Sanitary Committee it is again my duty to present an Abstract of the Annual Reports of the Local Medical Officers of Health, and to preface the same with a short account of the work of my Department during 1898.

By such a preface it is manifestly impossible to convey any adequate idea of the many and varied lines upon which the work runs. In my last report I endeavoured by a long list of subjects to show the great diversity of the work which is referred to us and which does not lend itself to any easy recapitulation. In the remarks which follow, therefore, I only propose to refer to certain routine branches and to mention a few of the principal items in the history of the department during 1898.

Consultations.—My advice and assistance was sought and given on a large number of occasions during 1898. Considerably over a hundred personal consultations took place, many of them upon matters of emergency such as dangerous outbreaks of disease, difficult diagnoses, unsound food, &c. Following up the opinion which I expressed in my last report as to the usefulness of this personal intercourse, I have on many occasions, often by request, attended the meetings of District Councils and advised them on sanitary problems—chiefly hospital accommodation. I should like to add that I have always been received at these meetings with the utmost courtesy and good feeling and I am quite sure as to the value of the results thus achieved. In addition to this I find that on 228 occasions during the year I was requested by local medical officers and others to express my opinion by letter upon questions embracing almost every difficulty to be encountered in the sanitary service. I am always ready to be of assistance in this way wherever I can.

Inspections.—Many of the matters referred to this Department, whether in the way of complaints from aggrieved persons, or questions submitted by local sanitary officers, necessitate a preliminary inspection of the surroundings. During 1898 I made inspections and more or less detailed reports upon some 87 occasions, irrespective of the systematic local investigations concerned with the sanitary survey of the Riding, or

with the various West Riding Water Bills. These reports are not infrequently accompanied by analyses or elucidated by photographic representations of the conditions dealt with.

Water Supplies call for constant attention from this Department, and we are gradually accumulating a stock of classified information as to the sources and characteristics of the various supplies in the Riding, which is most valuable. It is impossible to set out the work of 1898 under this head, though it may be mentioned that the water supply of the following places has come under observation and examination during the year. Further particulars will be found in the record of the work of the laboratory :—

Bilton (Wetherby R).
Brotherton (Pontefract R.)
Burton Leonard (Knaresboro' R.)
Darton
Denaby Main (Doncaster R.)
Fairburn (Pontefract R.)
Farsley
Ferrybridge (Pontefract R.)
Harrogate
Hemsworth
Horsforth
Linthwaite
New Mill
Northowram
Poppleton (Great Ouseburn R.)
Rishworth
Shafton (Hemsworth R.)
Stourton (Rothwell)
Waddington (Bowland R.)

Water Bills before Parliament, 1898.—Four large water schemes affecting the West Riding were promoted during the session of 1898, viz., by the Halifax, Todmorden, Rochdale and Keighley Corporations. In accordance with my standing instructions I carefully investigated the gathering grounds and sources of supply proposed to be appropriated by these Bills, and after making a great many analyses and experiments I reported that in my opinion the water in each case had a decided plumbo-solvent action and was likely to endanger the public health if distributed through leaden pipes without due precautions. The Keighley Corporation met the views of the Committee by inserting a clause in their Bill undertaking to prevent any dangerous action on lead by filtration or chemical treatment. Negotiations for a somewhat similar clause in the Halifax Bill fell through at the last moment, and petitions were lodged by the County Council against that Bill and also against the Rochdale Water Bill,—the question of opposing the Todmorden Bill being reserved for the second stage. Eventually, however, the County Council after endeavouring to get a satisfactory hearing in the House of Lords retired from the opposition feeling that, important as their contentions were, the difficulty and hardship of sustaining repeated Parliamentary contests under the present state of the law were too great ; and the Committee were especially guided to this decision by the reflection that through their efforts in the past the attention of the Parliament and of the public had been forcibly drawn to the importance of this matter, and further, it seemed probable that ere long the Government might formulate a general clause for all new water schemes on the lines for which we have repeatedly striven.

Nuisances, Insanitary Conditions and Outbreaks of Disease are reported at the office almost daily, and various steps are taken according to the circumstances of each case. Sometimes a letter to the local officer effects all that is required; often an inspection and investigation has to be made, while in a comparatively few instances the subject has to be brought before the Sanitary Committee for their consideration and action. The full list of such matters arising during the year is altogether too lengthy for reproduction here.

Sanitary Survey of the Riding.—During 1898, I presented on the 13th June the fourth volume of this work, viz., that dealing with the eleven sanitary districts within the Barnsley Union. This survey is intended to constitute a sanitary encyclopœdia of each district and involves an enormous amount of work in inspection and preparation. The one dealing with the Barnsley Union, for instance, relates to an urban population of close upon 100,000 persons and sets forth all the sanitary attainments and requirements of each district.

There is no doubt that the action of the Committee on these surveys is having a progressive effect upon the sanitary administration of the Riding, and it will be interesting to the sanitarian of the next generation to compare the state of these districts with that recorded in the County Medical Officer's Sanitary Survey.

Reports.—On five occasions during the year I presented printed General Reports to the West Riding Sanitary Committee, dealing with 59 different matters engaging the Committee's attention. In addition, I abstracted and reported upon the 171 annual reports of the local medical officers for 1897, and I also dealt with no less than 125 special reports relating to outbreaks of dangerous infectious disease in the Riding.

Hospital Accommodation. — This all-important subject continued, during 1898, to engage the attention of the Sanitary Committee who have taken into consideration the requirements of practically the whole Riding on this subject. Continuing the list which I presented in my last Annual Report, I may say that during 1898 I enquired into and formally reported upon the necessity of hospital accommodation in the following 14 sanitary districts: Altofts, Bishopthorpe Rural, Castleford, Featherstone, Great Ouseburn Rural, Horbury, Leeds Rural, Methley, Normanton, Northowram, Sandal, Tadcaster Rural, Thorne Rural, Whitwood. The needs of many other districts also engaged the attention of the Committee, and altogether a great deal of progress was made. It is enough to state here that three Joint Hospital Orders were made by the County Council after Local Inquiries held during the year at Selby, Harrogate, and Normanton; and the Committee also came to a conclusion with regard to the Huddersfield Union. The following list shows the particulars of each of the Joint Isolation Hospital Districts which have been created by the County Council up to date:—

ORDERS MADE BY THE WEST RIDING COUNTY COUNCIL, UNDER THE ISOLATION HOSPITALS ACT, 1893.

No. of Order.	Date.	Sanitary Districts embraced.	Total Area.	Total Population. (1891).	No. of Members on Joint Committee.
			Acres.		
1	13.1.97	Penistone Union ... (6 Urban 1 Rural)	34,983	17,017	20
2	14.7.97	Handsworth Urban, Kiveton Park Rural, and the Southern part of Rotherham Rural	50,728	27,758	13
3	13.10.97	Wharfedale Union . (8 Urban 1 Rural)	71,019	51,256	20
4	9.3.98	Selby Urban and Selby Rural	38,622	12,159	8
5	13.7.98	Harrogate, Knaresborough and Knaresborough Rural	41,236	27,158	12
6	12.1.99	Farnley Tyas, Kirkburton, Kirkheaton, Lepton, Shelley, Shepley, Skelmanthorpe, Whitley Upper, Emley, Flockton	17,302	19,420	14
7	12.1.99	Golcar, Holme, Holmfirth, Honley, Linthwaite, Marsden, Meltham, Netherthong, New Mill, Scammonden, Slaithwaite, South Crosland, Thurstonland	45,682	55,111	23
8	12.1.99	Altofts, Castleford, Featherstone, Normanton, Whitwood	9,139	40,502	11
		Total ...	308,711	250,381	

In connection with the provision of adequate hospital accommodation throughout the Riding, I have been called upon to attend the meetings of local sanitary authorities, often held in the evenings, and personally explain to them what is required and the best means of meeting those requirements. As stated elsewhere, I believe that this personal contact has been productive of great good. During 1898, I find I attended meetings of the following Authorities or their Committees :—Altofts, Castleford, Featherstone, Harrogate, Hunslet R., Knaresborough, Knaresborough R., Methley, Normanton, Rothwell, Whitwood.

Meetings of County Council and Committees.—I was present at each meeting of the Council and at the 13 meetings of the Sanitary and Administrative Sub-Committees. The Law and Parliamentary, Finance, General Purposes, and Asylums Committees have also been attended when necessary and reports made to them upon matters referred to my department. I was delegated by the Sanitary Committee to attend the Congress held at Birmingham, in September, 1898, in connection with the Sanitary Institute.

Public Inquiries.—The following is a list of the Local Government Board Inquiries held in the West Riding during 1898, relating to sanitary matters. Where necessary or advisable I have attended these inquiries on behalf of the Committee. I have also been present and assisted at all the hospital and other inquiries affecting sanitary questions which have been held by the County Council during the year:—

Date.	Sanitary District and *Locality*.	Subject.	Amount.	Result.
			£	
3.1.98	Mytholmroyd ...	Sewerage and disposal	12,500	
7.1.98	Honley and South Crosland	Sewerage ...	15,635	Sanctioned
11.1.98	Halifax R. *Skircoat*	Land for Outfall	—	
27.1.98	Wakefield R. ... *Crigglestone*	Sewerage ...	250	
28.1.98	Do. *Old Sharlston*	Sewerage and disposal	1,100	
9.2.98	Batley ...	Surface Water Drain.	15,000	Sanctioned
9.2.98	Gomersal ...	Land for Outfall	—	Sanctioned
17.2.98	Tadcaster R. ... *Tadcaster E. & W.*	Provisional Order for Land	—	Sanctioned
18.2.98	Wetherby R. ... *Tockwith*	Ditto	—	Sanctioned
22.2.98	Ardsley E. and W. *New Scarboro'*	Sewerage ...	2,900	Sanctioned
1.3.98	Rotherham R. ... *Aston, etc.*	Sewerage and disposal	27,300	Refused
2.3.98	Do. *Brinsworth and Whiston*	Ditto	2,387	Refused
8.3.98	Skipton ...	Sewerage Extension	1,200	
22.3.98	Queensbury *Mountain & Beggarington*	Water Supply ...	1,500	
31.3.98	Hemsworth ... *Ryhill*	Burial Ground ...	1,000	
6.4.98	Dewsbury Joint Hospital Board	Isolation Hospital ...	22,000	
26.4.98	Wakefield ...	Sewerage ...	1,224 (part of 16,000)	Sanctioned
27.4.98	Darton ...	Sewerage and disposal	11,500	Refused
28.4.98	Morley ...	Sewerage ...	400 (part of 43,000)	
14.6.98	Mirfield ...	Sewerage and disposal	5,800	Refused
22.6.98	Penistone R. ... *Silkstone*	Ditto	2,000	Sanctioned
28.6.98	Pudsey ...	Land for sewage disposal	4,900	
29.6.98	North Bierley ...	Culvert ...	600	
30.6.98	Burley-in-Wharfedale. *Rose Bank*	Sewerage ...	500	Refused

Date.	Sanitary District and *Locality.*	Subject.	Amount.	Result.
			£	
5.7.98	Wakefield R. ... *Outwood*	Ditto	705	
7.7.98	Otley ...	Ditto	600	
13.7.98	Saddleworth ...	Insufficient Sewers ...	—	Manufacturer's application refused
14.7.98	Hunslet R. ... *Temple Newsam & Thorpe Stapleton*	Water Supply ...	939	
15.7.98	Great Ouseburn R. *Acomb*	Sewerage ...	1,000	
16.8.98	Wortley R. ... *Tankersley*	Sewerage and disposal	4,500	
18.8.98	Wakefield R. ... *Crofton*	Ditto	3,850	Refused
6.9.98	Goole R. ... *Swinefleet*	Sewerage ...	1,000	Refused
6.9.98	Harrogate	Surface Water Drain.	8,500	
7.9.98	Burley-in-Wharfedale	Water Supply ...	200	
9.9.98	Barnoldswick ...	Sewerage and disposal	1,840	
	Do.	Water Supply ...	1,000	
13.9.98	Do.	Site for Hospital ...	—	
15.9.98	Kiveton Park R. *Anston*	Sewerage and disposal	1,800	Refused
5.10.98	Idle	Ditto	700	Sanctioned
18.10.98	Cleckheaton ...	Cemetery ...	6,000	
18.10.98	Do.	Sewerage ...	550	
19.10.98	Soothill Nether ...	Sewage disposal ...	1,000	Refused
20.10.98	Thornton ...	Sewerage, &c. ..	2,540	
20.10.98	Bradford ..	Extension Scheme ...	—	Sanctioned
25.10.98	Hemsworth R. ... *South Elmsall and Moorthorpe*	Sewerage and disposal	4,300	Sanctioned
27.10.98	WortleyR. *Bradfield*	Water Supply ...	3,750	
1.11.98	Haworth ...	Sewerage ...	12,000	Refused
4.11.98	Penistone ...	Water Supply ...	500	
11.11.98	Handsworth ...	Sewerage and disposal	3,000	
29.11.98	Gomersal ...	Waterworks purchase	10,000	Sanctioned
29.11.98	Do. *Gt. Gomersal*	Sewerage and disposal	8.000	Refused
2.12.98	Knaresbro' R. .. *Knaresbro' Outer*	Sewerage ..	800	
9.12.98	Penistone R. ... *Crane Moor*	Sewerage and disposal	1,000	Refused

The Bradford Extension Inquiry held in October, 1898, threw a great deal of work upon this department in the preparation of statistical and other evidence as to the sanitary aspects of the proposal. The Inquiry extended over eight days, the West Riding County Council being represented by Mr. Cripps, Q.C., and Mr. Williams.

In addition I also attended and assisted in the Inquiries held under the Privy Council with respect to the incorporation of Pudsey and Shipley respectively.

The Laboratory was kept very busy during the early part of the year with the work of examining samples from the gathering grounds proposed to be appropriated by the four important Water Bills brought before Parliament in the Session of 1898. To arrive at a satisfactory opinion as to what would be the practical lead-dissolving power of such waters when actually collected in reservoirs for distribution, it was necessary to make many prolonged experiments and to examine numerous samples collected under different conditions as to locality and weather.

During the year, also, 132 samples of tap-water were examined for lead in solution, while complete sanitary analyses were made of 53 drinking waters, mostly from surface wells or other suspicious sources. These analyses were for the most part intended to corroborate, or otherwise, complaints addressed to this department, or to assist the Committee in their endeavours to improve the various water supplies under consideration, or, as in several instances, to determine the connection existing between outbreaks of disease and the water used for drinking.

On not a few occasions I have received at the laboratory specimens of unsound food or portions of the organs of diseased or suspected carcases, forwarded for my opinion by Medical Officers of Health and others. I hope, shortly, with the extension of bacteriological work, to be of increased usefulness in this direction.

Tuberculosis.—The West Riding Sanitary Committee has promptly associated itself with the work which has been placed at the door of all Sanitary Authorities by the recent development of our knowledge as to the causes and prevention of consumption. On the 5th December, 1898, I presented a report on the subject to the Administrative Sub-Committee, who thereupon authorised me to arrange with Prof. G. Sims Woodhead to come down and deliver a lecture on the subject to the Sanitary Authorities and other interested parties in the West Riding. The success which attended that lecture belongs to the story of 1899, but I mention the matter here because a great deal of preliminary work on the general subject was done in my department during 1898 in the way of compiling statistics, inspecting cowsheds, and preparing lantern slides and specimens for demonstration.

Sale of Food and Drugs Acts.—The two following Tables are in continuation of those submitted in previous Reports :—

(*a*) Quarterly Record of Samples taken during 1898:—

District.	Inspector.	Samples sent to Analyst during 1898.				
		First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Total.
Barnsley ...	J. H. Bundy ...	33	40	33	33	139
Central ...	E. Crabtree ...	63	60	19	17	159
Harrogate ...	H. Gamble ...	44	77	37	60	218
Mirfield ...	H. Newbould ...	52	61	55	50	218
Pontefract ...	W. H. Wilson ...	53	56	60	55	224
Rotherham ...	J. Wilson ...	78	68	79	76	301
Shipley ...	J. Duce ...	48	71	44	57	220
Skipton ...	A. Randerson ...	97	49	50	52	248
Sowerby ...	W. H. S. Crabtree...	91	63	72	27	253
Total Samples taken by County Inspectors ...		559	545	449	427	1980*
Police Superintendents ...		—	—	—	—	—
Local Authorities		33	34	77	65	209
Private Purchasers		—	—	—	—	—
Total Samples Analysed ...		592	579	526	492	2189

* The corresponding number in 1897 was 2227.

(*b*) Yearly Record of Samples, 1889-98.

	Genuine.	Doubtful or Inferior.	Adulterated.	TOTAL.	Percentage Adulterated.
1889	288	23	53	364	15%
1890	281	57	70	408	17 ,,
1891	238	24	45	307	15 ,,
1892	541	41	87	669	13 ,,
1893	1274	109	193	1576	12 ,,
1894	1319	104	172	1595	11 ,,
1895	1790	119	176	2085	8 ,,
1896	2200	156	161	2517	6 ,,
1897	2213	141	82	2436	3 ,,
1898	1903	197	89	2189	4 ,,

The slight increase in the percentage "adulterated" and "inferior" is, I think, entirely due to greater vigilance on the part of the inspectors, who have been instructed not to purchase large numbers of samples which

are unlikely to be sophisticated. I do not think the figures should be taken to show that there is any real increase in adulteration as compared with the previous year.

I have advised and instructed the Inspectors upon every sample which proved to be other than genuine; and in 53 instances legal proceedings were taken against vendors of adulterated samples. Where questions arose involving medical opinion as to the therapeutic action of drugs, etc., I have attended and given evidence in Court.

Of the 209 samples which were submitted for analysis by local authorities, 118 were samples of new milk purchased by local sanitary Inspectors under the arrangements whereby the County Council pays the cost of analysis, etc. These Inspectors are supplied with outfits and instructions from my office, and this work has proceeded satisfactorily. The authorities who availed themselves of this system during 1898 were:—

Castleford	Ilkley	Rothwell
Clayton West	Keighley	Shelf
Golcar	Linthwaite	Skipton
Goole	Meltham	South Crosland
Greetland	Penistone	Southowram
Hemsworth R.	Pudsey	Sowerby Bridge
Honley	Rawmarsh	Todmorden
Horbury		

British Pharmacopœia.—In April, 1898, a new edition of this work was produced and came into operation. Each of the nine County Council Inspectors was provided with a copy of the book by direction of the Committee, but I advised that no samples of drugs should be purchased during the year under the new formulary, in order to give traders a fair opportunity to realise its requirements, and to dispose of their stocks where necessary.

Staff.—Besides Mr. W. Holmes, the County Sanitary Inspector, and the nine Inspectors under the Sale of Food and Drugs Acts, the direct staff of the department includes:—

S. M. Jessop, F.C.S., Chief Clerk and Laboratory Assistant.
J. C. Bennett, Correspondence and Statistical Clerk.
J. W. Gooderidge, General Clerk.

During 1898 I find that 2811 letters were despatched, as well as 3389 circulars and stereotyped communications.

Abstract of Annual Reports 1898.

At the beginning of 1898 the West Riding Administrative County consisted of 167 sanitary districts,—137 urban and 30 rural. By the amalgamation of Bingley, Bingley Outer and Wilsden, which took place during the year, the number of districts became 135 urban and 30 rural. But the number of annual reports relating to these districts is 170, because the three medical officers affected by the change above referred to remained in office till the close of the year, and, further, one of the larger rural districts has two medical officers and another has three.

Of these 170 reports, I have received all but one (Eccleshill), a lacuna caused by the death of the medical officer of health. Fortunately I have been able to obtain access to the statistical records of this district, so that the figures which I now submit for the year 1898 are based upon complete returns received from every district in the Administrative County.

I am pleased to state that the reports have been forwarded to the County Council much more promptly than in previous years, and this has enabled me to present my abstract three months earlier than has been possible heretofore. There is still much room for improvement in this matter as will be seen from the following figures which show that only 98 reports were received up to the end of March, 67 coming between then and June 30th, while four actually lingered until July.

Annual Reports Received.

Jan.	Feb.	March	April	May	June	July	Total
8	30	60	55	10	2	4	169

If I could have all the local reports by the end of March, the County Abstract would be issued early and would gain in value proportionately.

The local reports for 1898 again show some improvement in point of completeness, speaking generally. The West Riding Sanitary Committee have repeatedly urged the desirability of every medical officer's report being circulated in type, and I find that this year there is a further increase in the number of reports so printed :—

Number of Authorities who Printed their Medical Officer's Annual Report.

Year 1889 ...	37	Year 1894 ...	110
,, 1890 ...	55	,, 1895 ...	119
,, 1891 ...	93	,, 1896 ...	121
,, 1892 ...	98	,, 1897 ...	131
,, 1893 ...	108	,, 1898 ...	138

The names of the 31 authorities who did not print their Medical Officers' Annual Reports for 1898, will be gathered from Table III folded at the end of this report (col. 1).

VITAL STATISTICS.

Population.—Most of the statistical deductions which follow are based upon an estimate of the number of people living in the Administrative County at the middle of the year 1898. The orthodox method of arriving at such an estimate assumes that the rate of increase revealed by the census enumerations of 1881 and 1891 has prevailed uniformly since the latter date. The population of each district in the County has been estimated upon this principle and appears in Table I. (see end), except in a few instances where abnormal rates of increase have recently prevailed.*

At the middle of 1898 it is estimated that the number of persons living under the jurisdiction of the West Riding County Council was 1,472,338. Of this number 1,127,442 resided in the 135 urban sanitary districts, while 344,896 belonged to the rural districts.

Area.—Taking 1,700,783 as the acreage of the Administrative County we find that the density of population was,—

In the urban districts	...	3·1 persons per acre.
In the rural districts	...	0·26 ,,

Births.—These numbered 43,727, being 50·5 per cent. males and 49·5 per cent. females.

The Annual birth rate for the year was therefore 29·7 per thousand in the West Riding as compared with 29·4 for England and Wales. The average County birth rate during the previous five years was 30.5. The following places registered the highest birth-rates in the Riding during 1898 :—Balby with-Hexthorpe 43·9, Handsworth 42·0, Hoyland Nether 42·1, Knottingley 42·1, Wath-upon-Dearne 42·1, Whitwood 44·7, Wombwell 42·1, Doncaster Rural 46·0, Hemsworth Rural 42·3, Knaresborough Rural 44·0.

Still Births.—Only seven reports give any figures, but these together record 112 still births. The number for the County, if it could be ascertained, would be found to be very large.

Illegitimate Births.—Many of the reports give no information, but among those which do, record is made of 897 illegitimate births during 1898. The percentage to total births was therefore not less than 2·1 in the urban and 1·9 per cent. in the rural districts.

Deaths.—The total registered in the Administrative County during 1898 was 26,097 (males 13,589, females 12,508), affording a death-rate of 17·7 per thousand inhabitants. This is higher than the previous two years, and, indeed, slightly above the average for the past five years (see Table on page 12). There is nothing remarkable about the death-rates for the individual districts given on Table I., except, perhaps, such low rates as Holme, 9·7; Thurstonland, 5·6; and Wharfedale N., 9·0, and these have really little statistical value on account of the small numbers upon which they are based.

Uncertified Deaths occurred during 1898 to the number of 413, or 1·6 per cent. of the total deaths.

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* A case in point is Barnoldswick. The 1898 population calculated by the customary rule is 4208, while local knowledge of the number of occupied houses, etc., shows that the population is not less than 6725.

Urban and Rural Statistics, 1898.

The following Table attempts to differentiate between "urban" and "rural" districts, and shows the comparative rates for 1898, again verifying the accepted idea that country life is more favourable to longevity than town life :—

	Annual Rates per 1,000 of the estimated population.					Infant Mortality (Deaths under one year per 1,000 Births)
	Birth-rate.	Death-rate.	Zymotic Death-rate.	Phthisis Death-rate.	Respiratory Death-rate.	
(1) Urban Districts (137) in the West Riding	28·8	17·5*	2·3	1·3	3·3	170
(2) Rural Districts (30) in the West Riding	32·6	17·4*	2·1	1·1	3·2	151
(3) West Riding Administrative County	29·7	17·7	2·2	1·3	3·3	165

* Excluding deaths in Lunatic Asylums.

Annual Rates, 1890-98.—The next Table gives the same rates for a series of years, setting out also the individual diseases which are usually grouped together as zymotics :—

West Riding Administrative County, 1890-1898.—Annual birth and death rates per 1000 of the population (from the county medical officer's annual abstracts).

	1890	1891	1892	1893	1894	1895	1896	1897	1898
Birth-rate	31·1	29·6	30·8	31·1	29·9	30·9	30·4	30·5	29·7
Death-rate	20·0	21·4	18·0	19·3	16·0	18·6	17·2	17·0	17·7
Infant Mortality† ...	149	162	143	168	138	163	149	151	165
Zymotic Death-rate	1·69	1·87	1·71	2·48	1·39	2·10	2·00	1·94	2·21
Small Pox ,, ,,	*nil*	0·02	0·12	0·11	0·03	0·02	0·00	0·00	0·00
Scarlet Fever ,, ,,	0·30	0·20	0·22	0·20	0·18	0·17	0·22	0·22	0·16
Diphtheria ,, ,,	0·12	0·12	0·11	0·12	0·10	0·11	0·12	0·08	0·11
Croup ,, ,,	0·08	0·08	0·10	0·12	0·09	0·10	0·11	0·08	0·07
Typhus ,, ,,	0·00	0·00	0·00	0·00	0·00	*nil*	0·00	*Nil*	*Nil*
Enteric Fever,, ,,	0·20	0·19	0·16	0·28	0·19	0·20	0·20	0·19	0·25
Continued ,, ,, ,,	0·01	0·01	0·01	0·00	0·00	0·00	0·00	0·00	0·00
Measles ,, ,,	0·27	0·53	0·25	0·38	0·25	0·33	0·56	0·32	0·41
Whooping C. ,, ,,	0·28	0·37	0·41	0·24	0·34	0·19	0·44	0·22	0·29
Diarrhœa ,, ,,	0·43	0·35	0·33	1·03	0·21	0·98	0·35	0·83	0·92
Respiratory ,, ,,	4·6	5·1	3·9	3·8	3·2	3·6	3·3	3·1	3·3
Phthisis ,, ,,	1·8	1·6	1·4	1·5	1·3	1·4	1·3	1·3	1·3

† Deaths under one year per 1000 births.

The following Table gives similar information for four recent years, but extended so as to allow a comparison of the urban and rural parts of the Riding.

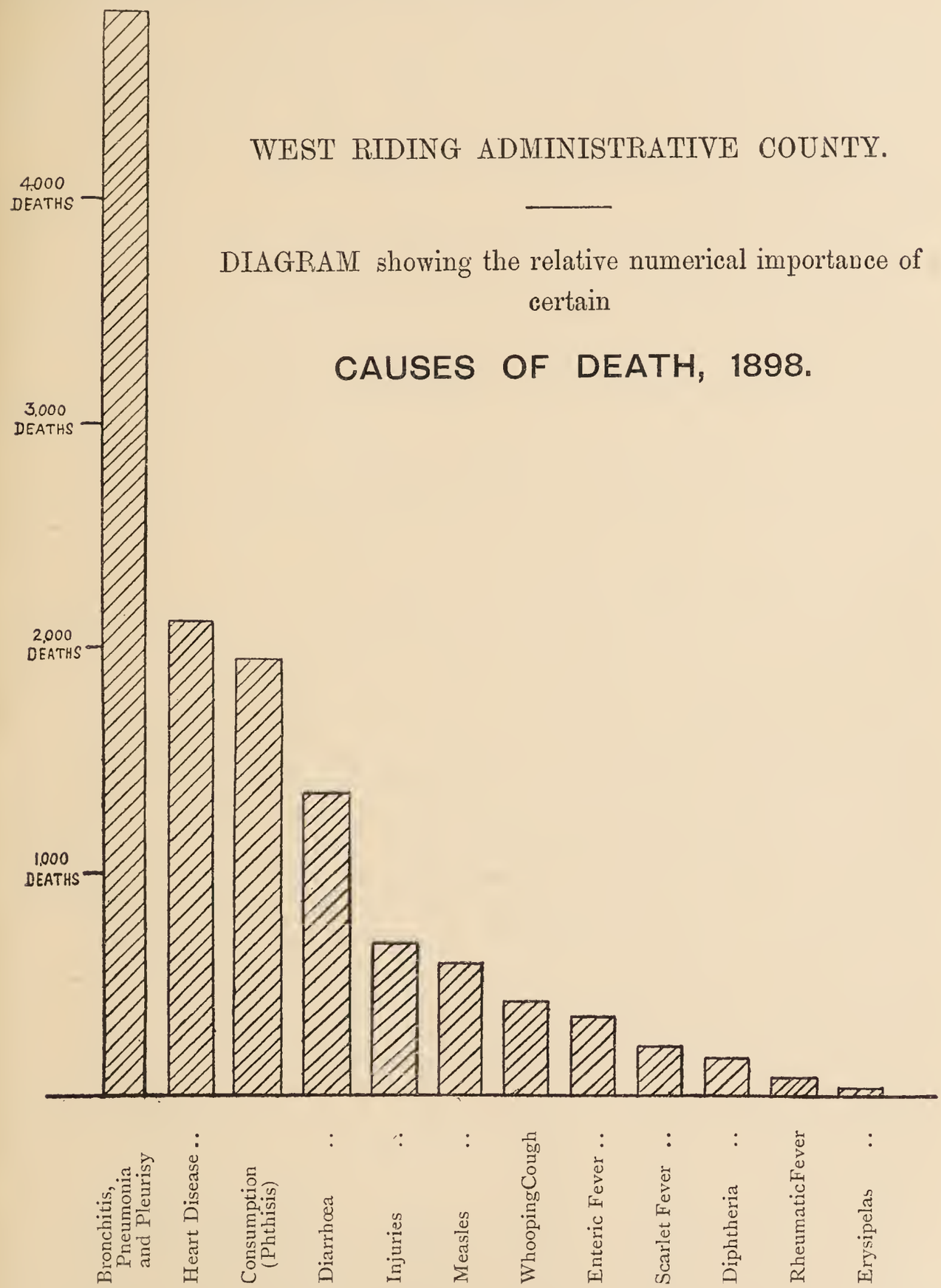
TABLE SHEWING THE COMPARATIVE INCIDENCE OF THE PRINCIPAL ZYMOTIC DISEASES IN THE URBAN AND RURAL DISTRICTS RESPECTIVELY—

(From the County Medical Officer's Abstracts.)

	1895		1896		1897		1898	
	Urban Districts.	Rural Districts.	Urban Districts.	Rural Districts.	Urban Districts.	Rural Districts.	Urban Districts.	Rural Districts.
Small Pox ...	0·02	0·01	Nil	0·00	0·00	Nil	0·00	0·00
Scarlet Fever ...	0·16	0·20	0·24	0·18	0·24	0·15	0·16	0·16
Diphtheria ...	0·12	0·09	0·12	0·14	0·08	0·07	0·11	0·11
Croup ...	0·08	0·13	0.13	0·08	0·07	0·08	0·07	0·05
Typhus ...	Nil	Nil	0·00	0·00	Nil	Nil	Nil	Nil
Enteric Fever ...	0·23	0·11	0·21	0·16	0·20	0·15	0·25	0·22
Continued Fever ..	0·00	0·00	0·00	Nil	0·00	0·00	0·00	Nil
Measles ...	0·36	0·26	0·63	0·32	0·34	0·24	0·44	0·31
Whooping Cough..	0·19	0·19	0·47	0·31	0·23	0·21	0·31	0·24
Diarrhœa ...	1·04	0·82	0·35	0·34	0·89	0·64	0·91	0·96
Total Zymotic Death-rate ...	2·20	1·81	2·15	1·53	2·05	1·54	2·25	2·05
Do. for Administrative County generally ...	2·10		2·00		1·94		2·21	

It will be noticed that the incidence of infectious sickness is considerably greater in the urban districts of the Riding than in the rural parts.

Comparative Mortality.—The following diagram is intended to show in a graphic way the important position occupied by respiratory diseases and phthisis as contributors to the death-rate of 1898.



Ages at Death.—The ages at which the people die is a matter of supreme importance, and it will be interesting to look for gradual improvement in the future with the recent general advancement of sanitation, although the following Table for 1898 does not by itself seem encouraging.

Deaths Recorded at certain Age-periods, 1898.

	Under 1 Year.	1 to 5 Years.	5 to 15 Years.	15 to 25 Years.	25 to 65 Years.	65 and upwards.	All Ages.
Urban Sanitary Districts (137)	5507	2601	794	926	5715	4245	19788
Rural Sanitary Districts (30)	1694	685	237	293	1723	1677	6309
Total Administrative County ...	7201	3286	1031	1219	7438	5922	26097

Infantile Mortality takes a very prominent position in our public health statistics. Out of every thousand children born in the Riding during 1898, no less than 165 died before completing their first year. This ratio is higher than in any year since 1893. The rural districts are naturally not so bad as the urban districts; the proportions being 151 in the former and 170 in the latter. If these general figures seem alarming, what is to be said for individual districts, such as Featherstone, Heckmondwike, and Ravensthorpe, where actually one child in every four never sees the first anniversary of its birth.

This subject has been largely dealt with in past years, but it still calls for comment in most of the reports under review, and indeed cannot be passed by. Mr. Twigg, of Mexborough, expresses the feelings of many medical officers when he says:—"One gets tired, year after year, and yet it is one's "duty, of reiterating the same old tales of ignorance and deficiency of "domestic hygiene, especially that part of it which refers particularly to very "young children." He adds, "I have been at the trouble during the past "year of inquiring of just over 100 mothers, chosen at random, on what they "feed their children up to three months old, and you will be surprised to "hear that only 44, or less than half, trusted to the breast alone; just over "30 trusted to the breast with bread, biscuits, cornflour and the like; about "20 trusted to cows' milk mixed with the above-mentioned articles; two or "three treated the matter as a joke, and said, 'Oh, we let them have anything "that happens to be going.' But almost without exception, there was a "history of the child being fed the first three or four days on gruel or milk "thickened with cornflour—kinds of food which I need scarcely point out, "having mentioned it so often, a young baby is utterly incapable of digesting. "Thus you see the seeds are laid for the wasting disease called marasmus, "and the irritation of unsuitable foods give rise to the diarrhœa and the "convulsions."

On the same subject, in the Batley report, Mr. Erskine Stuart writes:—"No form of artificial food, however skilfully prepared, can ever prove an "efficient substitute for the mother's milk. In countries where the mother "invariably suckles the child, infantile mortality is low. During the siege of "Paris, when the general mortality of the inhabitants was doubled, that of "infants *fell* 40 per cent., owing to the mothers being compelled, through "stress of circumstances, to suckle their infants. A similar result was "experienced in Lancashire during the cotton famine. Legislation is "required with regard to the control of married women who are bearing "children. If a nursing mother is employed in a mill, the concentration of

"her mind upon her work, and her absence from her infant, both tend to stay "the flow of milk.

The medical officer of health at Whitwood is also of opinion that "the "serious loss of infant life is, in a great number of cases, due to the "prevalent use of various starchy preparations which are facetiously labelled "'foods' by the manufacturers. It cannot be too strongly impressed upon "parents and guardians that these 'foods' are most injurious to young "infants, and that the only proper food for them is that supplied by nature "in the form of milk."

Mr. J. J. Jackson (Wakefield Rural) has a suggestion to make—"While "education is in its present forward condition," he writes, "surely it would "not be too much to ask that some simple but explicit teaching of the "rudiments of physiology as applied most particularly to the proper food for "infants, the nature of foods in general, and the clothing and treatment "of children should be given to the future mothers of our people. This "might, I think, form a very useful subject for continuation classes for "girls. Hints on ventilation and the utility of sunlight are urgently required, "and I am sorry to say that the cleanliness of children is sadly neglected in "very many instances."

The medical officer of health for Yeadon protests against the attempted "hardening" of infants, which he finds "rather conduces to fatal results by "their catching cold. Infants loose heat very quickly. Again, many "children have plenty of clothing on during the day and too little at night. "This is an important matter, and still another is the persistency which many "people show in wearing and clothing their children with cotton—for example, "flannelette—in preference to woollen material. Every man, woman and "child in this country should wear woollen underclothing, at any rate in the "winter months."

Zymotic Diseases.—The seven principal classes of zymotic disease enumerated below attacked thousands of persons in the West Riding during 1898, and caused 3257 deaths, equal to a rate of 2·2 per thousand inhabitants. This is a higher rate than any year since 1893 (see table on page 12), but when proper hospitals are provided and made use of, it is safe to prophesy that the deaths under this head will diminish.

	Zymotic Disease.	No. of Cases during 1898.	No. of Deaths during 1898.
1	Small Pox	19	2
2	Scarlet Fever	5675	235
3	Diphtheria	650	166
	Membraneous Croup	154	99
4	Typhus Fever	—	—
	Enteric or Typhoid Fever ...	2089	362
	Continued Fever	58	4
5	Measles	Not notified	601
6	Whooping Cough	„	433
7	Diarrhœa	„	1355
	Cholera	—	—

As usual, the last three classes, which are not notifiable, contributed far more to the zymotic death rate than did the more alarming diseases at the head of the list.

Small Pox (Tables II., III., and pages 31 and 32). Nineteen cases of this disease occurred in the Administrative County during 1898, causing two deaths. Fourteen of these cases occurred at Goole in a sharp outbreak of doubtful origin.

The new vaccination legislation has been freely criticised in the annual reports of the medical officers of health, and the following extracts may be interesting :—

Mr. W. S. Mackenzie, Altofts, says :—"It has been my lot, lately, to "have been compelled to make many domiciliary visits under the new vaccina- "tion arrangements, and I have good reason to believe that in many cases "compulsory vaccination has been evaded, and in a great many more the "vaccinated area has been so small that sufficient protection is not secured "against small pox. The new glycerinated calf lymph, of the Local Govern- "ment Board, is the purest in the world, and there are such precautions "taken in its preparation that it is an absolute impossibility for any disease "to be conveyed through it, and it is to be hoped that recent prejudices "against vaccination may gradually disappear, and that the whole community "may in the future be as safe against small pox as the ordinary government "employee or the nurse in a small pox hospital."

Dr. Johnstone, Ilkley, asserts that if the new legislation is followed by a much greater neglect of vaccination than we have hitherto experienced, then "we must expect more frequent and severe epidemics of the disease, until the "feelings of the country are aroused, leading to fresh legislation, when, no "doubt, the question would be affiliated to the sanitary department of the "Government, which is its proper place, and receive that due attention and "consideration which its importance demands. Meantime, the ordinary mind, "taking an interest in the great questions of bacteriology and infection will be "gradually prepared, and willing to apportion vaccination in its due place, "among the blessings to humanity."

Dr. Hunter, of Pudsey, says :—"It may be accepted as a fact that a large "number of persons are 'conscientious objectors,' not because they come to "any logical or conscientious conclusions as to the value of vaccination, but "because they are by nature hysterically emotional, and in consequence are "easily led astray. That being so they are no more to blame than the "simple-minded credulous dupes of such sharpers as fortune-tellers, water- "diviners, and quacks."

All are agreed as to the value of the lymph which is now supplied to public vaccinators. Mr. Mackenzie, Normanton, says :—"There never was a "time when people had the opportunity of being so safely and efficiently "vaccinated as now, the lymph for vaccination now issued by the Local "Government Board being so absolutely pure that there is no possibility of "disease of any sort being introduced through it. In the days of arm-to-arm "vaccination parents were always somewhat anxious as to the condition of "health of the baby from which their own was vaccinated. Now the Local "Government Board only vaccinate healthy calves, and to make assurance

"doubly sure, as soon as the lymph is taken off, the calf is killed and "examined, and if it has a blemish of any sort, the lymph is not used. But "if everything is found satisfactory the lymph is issued to public vaccinators, "who are by law obliged to call at the home of every child unvaccinated at "the age of four months, and offer to vaccinate the child with this government "calf lymph; and they are also obliged to visit the home of and vaccinate "children of any age if requested to do so. With such safeguards and "facilities the prejudice against vaccination should disappear, and the com- "munity should be more generally vaccinated than for some years past, and if "all were efficiently vaccinated there is no doubt that small pox would "disappear from this country altogether."

Mr. J. Percival writes in the Pontefract rural report:—"I am glad to be "able to report on the efficacy of the calf lymph supplied by the Local "Government Board,"—while Dr. Buncle, of Featherstone, pays it the following tribute:—"I must say here that the calf lymph which I have seen "sent out by the National Vaccine Establishment is A 1, and as near perfection "as possible. The resulting vesicles are absolutely beautiful, with no areolæ. "The lymph is most carefully prepared, and altogether of such a high "character that the most fastidious 'conscientious objector' would be at his "wits' end to find a fault."

Dr. Robinson, of Rotherham, is inclined to think that the new Vaccination Act, though not perfect, contains some improvements, and adds:—"The use of "glycerinated calf lymph is to be commended, and will do away with many of "the objections to vaccination."

At Pateley Bridge, Dr. Lumsden emphasises the necessity for thoroughness in the operation of vaccination. "The best vaccinators," he writes, "make "at least four small insertions in the arm, and it is well to remember that "whereas persons with this number of good vaccination marks rarely die when "attacked by small pox, those vaccinated less efficiently have died in "appreciable numbers, and people with only one mark have died at the rate of "14 per 100 attacked. The too common practice of being content with one "insertion in the arm is, therefore, to be strongly deprecated."

Vaccination is said to be for the most part ignored at Batley, Brighouse, Clayton, Elland, Hebden Bridge, Hipperholme, Keighley, Luddendenfoot, Midgley, Northowram, Queensbury, Soothill Nether, Soothill Upper, Sowerby, Sowerby Bridge, and Todmorden Rural. In many other reports the general efficiency of vaccination is said to be unsatisfactory; while only a few medical officers feel justified in describing their districts as satisfactory in this respect.

Chicken Pox.—This disease was never quite absent from the Riding during 1898, cases occurring here and there throughout the year, especially in May and November. A small outbreak occurred at Ferrybridge in February and rapidly subsided.

Scarlet Fever (Tables II, III, and pages 31 and 32). The reports for 1898 make specific record of 5675 cases of this disease during the year causing 235 deaths, equal to a death-rate of 0·16 per thousand. This rate is considerably lower than in the previous two years; in fact it is the lowest Scarlet Fever death-rate since the establishment of the County Council.

A comparison of cases and deaths shows that during 1898 the disease was not of so fatal a type as in the previous year. In 1897 we find that 54 patients out of every 1000 died, while in 1898 the case-mortality was only 41 per 1000. This reduction in the relative fatality may probably be accounted for to some extent by the fact that isolation in hospital was resorted to in no less than 1681 cases of scarlet fever, as compared with 1198 cases isolated in the previous year.

During the year I received 17 special reports as to outbreaks of scarlet fever of a more or less serious extent in the following places :—Anston, Ardsley East and West, Barnoldwick, Bickerton, Eccup, Foulby, Great Houghton, Lothersdale, Netherton, Nostell, Shipley, South Kirkby, Southowram, Treeton, Wetherby and Wragby.

At Shipley, the outbreak was a very sudden one caused by an infected milk supply, 83 cases occurring in three weeks in October. The suspected milk supply was promptly stopped by the sanitary authority and all precautions taken. Dr. Foster, in his annual report says -- "Inquiry at the farm brought "out the fact that three members of the family had previously suffered from "scarlet fever and had but recently returned from the isolation hospital."

That home isolation is almost invariably a farce is supported by the following statement of the medical officer of health for Hoyland Nether :— "From one house" he writes "we had seven notifications, four from four "other houses, three from each of seven houses and from many more houses "two cases were notified." The above experience is also corroborated in the Doncaster rural report, where the medical officer writes as follows :— "62 cases of scarlet fever were reported from only 23 houses, or nearly three "per house, and as no doctor had probably been called to see the first "patients, the notification of two and three cases from the same house came "together."

The need for hospital accommodation is proved by the following occur- "rence in the Great Ouseburn rural district :—A case was notified at the "house of a dressmaker living near, and employing a young girl from the "cottage in which four of the cases (of scarlet fever) had occurred. All "the work in hand was ordered to be retained, and work immediately "discontinued. Four assistants were sent home, none of them being sub- "sequently attacked or infecting their homes."

The necessity of keeping a watchful eye upon gipsies and vagrants has been experienced in the Hemsworth rural district at great cost :—"An "epidemic of 281 at Little Houghton and Nostell originated by infection "imported to these townships by a party of so-called gipsies attending these "village feasts. . . . Of these 281 cases 250 were removed to the "infectious hospital."

Here is another instance (from the Wetherby rural district) of the numerous avenues by which the disease may be introduced :—"A boy having "been in the hospital suffering from scarlet fever was discharged on "October 3rd. On October 3rd he commenced attendance at the village "school and continued daily until October 24th. There was no other "scarlet fever in the village, and neither his brother nor any other child took "the disease from him. On October 22nd he revisited the hospital to bring

"home some articles of clothing he had left there. The clothing had been "disinfected and made into a parcel a week before in anticipation of his "visit. Unfortunately the parcel had been placed in the nurse's kitchen on "a shelf adjoining the toy box. The boy did not enter the hospital premises "but was allowed to take the parcel home. On October 24th his younger "brother developed symptoms of scarlet fever and was eventually removed to "the hospital. No other children in the village or in the neighbourhood took "the disease."

In discussing an epidemic of scarlet fever at Horsforth the medical officer of health writes, "Isolation for the whole of the cases was found "impracticable, so the services of a trained nurse were secured; it was "thought that she would assist to nurse the cases, and at the same time instil "into the minds of those she came in contact with the importance of the "preventative measures that could be adopted. I need scarcely tell you that "her services were found invaluable, and were much appreciated by the "patients."

The medical officer of health for Kiveton Park (Mr. C. Wills) is of opinion that, "judging from a more extended experience over many years, the "disease has assumed a milder form only since better means of drainage and "better sanitary arrangements were introduced."

Diphtheria (Tables II., III., and pages 31 and 32). During 1898 650 cases and 166 deaths were ascribed to this disease, which thus contributed 0·11 to the County death rate, or, if we include the 99 deaths attributed to 'membranous croup,' the annual death-rate was 0·18 per 1000. The figures show a somewhat increased prevalence when compared with the previous year, but not more than the average of five years.

Special reports as to outbreaks of diphtheria were received from Keighley, Horsforth and Boroughbridge. In the first-named place the disease assumed epidemic proportions, the figures for the year being 149 cases and 41 deaths. School attendance appears to have been one of the principal factors in spreading the disease at Keighley, and the same influence produced a rather serious outbreak at Otley in December.

Several reports extol the benefits of antitoxin. At Horsforth Mr. Bailey thinks, "there is no doubt that the comparatively new treatment of injecting "with antitoxin has modified the diphtheria death-rate to a very considerable "extent. In 26 cases of which I have record, the first 8 were treated without "antitoxin, and of these 3 died. The remaining 18 were all injected early, and "no deaths occurred, proving conclusively the merit of the preparation."

In the Knaresborough Report Dr. Mackay writes, "Even when prevalent, "these diseases should no longer swell the death returns, as the prompt use "of anti-diphtheric serum offers a certain cure, if used early, and with a great "measure of success even in cases far advanced. It can also be used as a "prophylactic to protect those in contact with the disease. In the presence "of an epidemic of diphtheria I think it would be the duty of a Sanitary "Authority to supply the medical men of the town with this powerful but "somewhat expensive remedy."

The medical officer of health for Goole gives the experience of many

others when he states that diphtheria often begins with a cold. He adds, "I have drawn the attention of the Council to the damp and unhealthy con- "ditions very common in that district arising from streets not made, and so often "covered with wet, mud, or refuse. Children living and playing around such "surroundings do readily contract sore throats, which I have shown develops "into membranous croup, or diphtheria."

Mr. Atkinson makes record of a small outbreak of diphtheria which occurred in March at Town Head, Silsden, causing two deaths. The outbreak was attributed by the inhabitants to the foul-smelling manure recently spread on a field close by, but on investigating the milk supply it was found that "the man who looked after and served the milk himself was suffering from a 'relaxed throat of a suspicious character." The medical officer adds, 'I made arrangements with him to cease having anything to do with the 'milk and we had no further cases."

Typhus Fever (Tables II, III, and pages 31 and 32). This now rare disease was, happily, entirely absent from the West Riding in 1898.

Enteric Fever (Tables II, III, and pages 31 and 32). During 1898 no less than 2089 cases of illness were diagnosed as enteric or typhoid fever, causing 362 deaths, equal to a yearly death-rate of 0·25 per 1000 of the people. The disease was distinctly more prevalent than in any year since 1893, the average death-rate for the previous five years being only 0·21.

Five special reports were sent to the County Council during the year relating to outbreaks of this disease at Batley, Liversedge, Shafton, Swinton, and Wath-upon-Dearne. Besides these, the following districts seem to have suffered an undue incidence of typhoid fever—Barnsley, Darton, Featherstone, Heckmondwike, Horsforth, Hoyland Nether, Keighley, North Bierley, Pudsey.

At Batley the infection was supposed to have spread by means of ice-cream. From October 1st to November 9th there were 65 cases notified, nearly all young people. "Thus," writes the medical officer of health, "during this period of "about six weeks we had three times as many notifications, and three times "as many deaths from this disease as during the whole previous nine months." On investigating the earlier cases he found that "in every case the children "had eaten ice-creams at Batley feast, sold by some of the itinerant hawkers "who visit us at these times." He adds "The children, in every case, began "to complain immediately after eating these ices, and at periods varying from "three weeks to a month they were notified as typhoid cases."

The neighbouring district of Soothill Upper was invaded by typhoid fever, which it was thought might have come from the same source, The medical officer of health writes:—"It is a fact that many of the patients were young "and had partaken of ice-creams, but it is not so easily understood why one "person should have the fever while her companion, who had eaten quite as "much, got off free."

At Dewsbury, also, ice-cream was suspiciously connected with an outbreak. The medical officer of health, after searching for the origin of the 22 cases notified in September, October and November, writes:—"In this instance it "appears very probable that one or more of the vendors of ice-cream were the

"means of disseminating the malady." He adds "I am not aware that the "sanitary authority or their officers have any power to stop or control the "manufacture of this commodity except shutting up the houses when found in "an insanitary state, and then the machinery used is so readily and easily "removed that this remedy is not to be absolutely relied upon."

The marked infectivity of enteric fever when improperly nursed is not so seriously considered by the public as it ought to be. Several quotations from the reports illustrate this. The medical officer for the Barnsley Rural District states :—"The first was in January, and in her case removal to the hospital "was refused, and the infectious nature of the disease was shown by the fact "that a relation living near, who had waited on her, and a servant girl from "another district who had also given assistance, both took the disease, and "were removed to the Kendray Hospital."

Dr. J. Mitchell Wilson in the report for Doncaster Borough writes :— "Enteric Fever has a greater power to infect others in the same house than "is generally believed, it was found that cases recurred near to houses where "cases had previously been reported. When a common closet is in use by "more than one family, or even an ashpit is common to two closets, the "risk of infection is increased. At the 26 houses where cases occurred last "year, a privy and ashpit were provided for 15 of these; for seven there was "an outside water-closet; for two a water-closet inside the house, and for three "a common trough water-closet."

At Goole "a man who had been in poor health for several weeks was "notified ill of enteric fever at the end of October; although the house was "small and contained a large family the patient would not consent to be "removed to the hospital. In less than a fortnight two fresh cases of fever "broke out in the same house, and these under pressure were removed. These "facts are given to prove that it is a mistake, often followed by serious "consequences, to consider cases of enteric or typhoid fever as not infectious."

Similar experience followed at Emley where the medical officer of health records that "all the cases (3) occurred in one house situated at Warburton, "and they occurred in March, August and September."

At Holme the medical officer of health is somewhat dubious. He writes :—"The second case was the father of the first patient, his illness "occurring in October; I am of opinion that this case arose in some way from "the other, though it is difficult to see how, when one considers the "precautions which were taken to prevent such a thing happening."

An interesting lesson may be derived from Stocksbridge, where "four "cases occurred almost simultaneously in the same house. . . . . It "transpired that a mere babe had come to the house from a district in which "typhoid was prevalent—some miles the other side of Sheffield, and that this "child had suffered from diarrhœa. I have no doubt," adds Dr. Robertshaw, "that the child really had typhoid, and that the other (older) children "contracted the disease from nursing the child, &c., no special precaution "being taken with regard to its excreta."

Insanitary environment is quoted as the predisposing if not the exciting cause in many districts. At Horsforth, "no milk supply was suspicious, and

"there was no evidence that the infection had been carried by means of "water. My own impression," says the medical officer, "is again that the "insanitary conditions of the parts mostly affected counted for much; for we "notice that Bachelor Lane, Lister Hill, Long Row, Gaunt's Fold, and "Finkhill, were picked out, and in all these insanitary conditions exist."

At Yeadon, Dr. McLean writes:—"I still adhere to my opinion that our "methods of excrement disposal and removal by means of the old fashioned "and abominable midden privy is the cause of such outbreaks. Every "observer must have noticed what dangerous sources of pollution, both to air "and soil, these privy middens are, and what centres of infection any or all of "them may at any time become, and this no matter how well constructed they "may be."

At Handsworth,—"the first case of an epidemic broke out in August, "at Normanton Springs, in property infected in previous years, and in con- "nection with which was a back yard littered with decaying animal and "vegetable refuse, and an overflowing midden with four privies. Eight other "cases took their origin from this one; the hot and dry weather of August "and September acting on local insanitary surroundings being, no doubt, the "cause of the spread."

The medical officer of health for Pudsey insists upon preserving the purity of the soil.—"Perhaps," he says, "in a particular year there are very "few cases of typhoid fever, and on the other hand there are epidemic years "when an exceptionally large number of cases occur. This is also what the "natural history of the disease would make us anticipate. The germs of "typhoid fever are really a low form of plants, fungi, and in their habits of "growth behave like other plants, for example take a larger fungus, the "common mushroom. In fields that contain the spawn we can gather a few "mushroom, nearly every year at the proper season, but occasionally they are "absent for a year, and in other years they grow in such abundance that the "ground is almost white with them. This difference apparently depends on "certain weather conditions of heat and moisture being favorable or otherwise "to their growth. In the same way it is probable that the growth of typhoid "fever fungus is stimulated or retarded by the state of the season as to heat, "wetness, etc. These germs in the ground are potential for evil. They are "the seeds of death and disease, buried, but ready to grow under suitable "influences."

Every year adds fresh corroboration to the theory of lengthy preservation of the organism in polluted soil. Mr. W. L. Allott writes "it was thought "that the disturbance of the old drains when putting in the new sewer, "together with an abnormal amount of sewer-gas might have had something "to do with the outbreak at Hoyland Common."

Again, at Silsden, "three of the cases occurred in Aire View, and "although nothing insanitary could be found at the time on the premises, it "is worth mentioning that the subsoil in these properties had been recently "disturbed in the taking up of old drains and laying the fresh connections "with the new sewers."

The medical officer of health for Meltham extends his enquiries to the conveniences at the workplaces, which in my opinion, are frequently a cause

of enteric fever. He reports—"I visited Meltham Mills, where all the people "worked who were affected, and did not find things so good as I should like. "After inspection I advised:—1.—The plan of automatically flushing the "urinals used by the workpeople. 2.—Cleansing and disinfecting the closets "at more frequent intervals. 3.—That no person employed in emptying the "closets should be allowed to prepare breakfast for other workmen. I would also "suggest that wash basins be provided for the use of the workpeople who take "their meals at the mill, as it is very important that food and drinking "vessels should not be contaminated with dirt of any kind."

I have often found dissemination of enteric fever by slop water. Dr. Scatterty, in following up his enquiries into the milk supply of houses invaded by the disease, visited the dairy outside his district, and writes:—"It was "further elicited that when the bed linen soiled with typhoid excreta was "washed the slop water was poured down a drain which was proved to "communicate directly with the water used by the farmer to wash his milk "cans. Although the milk supply was immediately stopped until a satis- "factory water supply was obtained, it was not for some weeks after that the "far-reaching effects of this contamination came to an end."

Other vehicles of dissemination are noted, for example, at Goole a patient was a sailor on a tug steamer. "The water supply used on board had been "taken from the river Ouse on the 15th September, at Naburn Lock, imme- "diately below the outlet from the York sewage works. This patient's illness "was notified on the 10th October, following upon a fortnight's ailing con- "dition. Another sailor, on the same boat, was notified ill of enteric fever on "14th October. He lived in another part of the town. I was informed that "a third member of the crew was also attacked with fever at Hull about the "same time."

The following case (from the Penistone Rural Report) illustrates how easily a medical officer of health may be thwarted in his endeavours to trace the infection. "The mother of the patient is a charwoman, who did the wash- "ing for an imported case of typhoid fever in the Wortley District. I had "ordered all the bedding from this case to be destroyed, but she (I suppose "not appreciating the danger) took home a feather pillow, which her son "appropriated for his own use. Later on, the mother suffered from the same "complaint."

In the Rotherham Rural District "professional nurses were employed to "take charge of the cases, and nourishment and stimulants were supplied, to be "used at the discretion of the medical attendant, and later on two cottages "were rented, and converted into a temporary hospital, and all cases were "removed there immediately they were notified."

In connection with the epidemic of enteric fever at Wath-upon-Dearne, the medical officer writes, "I cannot speak too highly of the benefit resulting "from the employment of a trained district nurse, in cases of enteric fever, in "a district like ours, where owing to the lack of hospital provision, patients "have to be treated in their own homes, and I have no hesitation in saying "that some of these poor patients owe their lives to Nurse Spencer."

Measles (Tables II., III., and page 32).—This disease was epidemic in one quarter or another of the Riding throughout the whole year.

It must have attacked many thousands of children, for it is credited with having caused 494 deaths in the urban districts of the Riding, and 107 in the rural districts. These deaths are equal to an annual rate of 0·44 per 1000 in the urban and 0·31 in the rural districts; or 0·41 per 1000 for the Administrative County as a whole. It would appear to have been more prevalent than in 1897, but not so bad as in 1896.

No less than 72 special reports were received by the County Council during 1898 relating to outbreaks of measles and the steps taken to prevent its spread. The closing of schools has been resorted to in many districts, often for a prolonged period. This interference with elementary education caused by measles alone is a serious matter in the West Riding. The continued spreading of the disease is often due to the careless attitude exhibited by parents towards measles, which surely ought to receive more serious attention, especially as the disease is often the precursor of an outbreak of scarlet fever because of mistaken diagnosis.

Measles has been dealt with at such length in previous reports that only brief extracts will be made here. The medical officer for the Borough of Dewsbury has reason to lament, as he does, the wasteful sacrifice of infant life from measles:—"This disease during its prevalence," he writes, "caused 41 deaths, only two of the patients being more than five years old. "Surely there is no necessity for this slaughter of the innocents. It is "almost enough to make us fatalists when, at longer or shorter intervals, "this scourge takes such a heavy toll of infant life, and we know that a great "number of the deaths are caused by careless, or rather ignorant, nursing, "and premature exposure."

In the Ilkley report the medical officer of health describes the effect of notification upon the incidence of measles, and shows how the benefits of that valuable measure may be rendered of little or no avail. He records that "notification had no chance in the arrest of this epidemic, but the parents "who concealed the cases were informed of the reprehensible nature of their "conduct, and it is hoped such behaviour will not be repeated. More than "once measles has been arrested by possession of the Notification of Diseases' "Act, and in having measles 'scheduled' it obviates the excuse, for inability "in diagnosis, made use of by the laity, with respect to scarlatinal and other "rashes. It must be admitted that after the first cases of concealment, there "was a more or less exemplary effort made by the laity to report the milder "cases (even where no medical attendance is needed), either directly to myself "or to the sanitary department at the Council's offices. When confidence is "established in the laity, and they begin to realise that reporting such cases "leads to their being protected and assisted in their efforts to prevent the "spread of infection, then much valuable help will be gained in this "direction."

Diarrhœa (Table II, and page 32) was very prevalent during the summer of 1898. Throughout the year it caused 1355 deaths in the Administrative County, equal to a death-rate of 0·92 per 1000. This incidence is greater than in the previous two years, being only exceeded in recent years by the figures for 1893 and 1895. A glance at the Table on page 13 shews that the fatality in the rural districts was 0·96 per 1000, as against 0·91 in the urban districts—a curious state of things.

The seasonal curve of diarrhœa practically followed its usual course, the figures shewing that the greatest prevalence was reached in September, and the minimum in March. Many quotations might be given on the etiology of the disease, of which the following may be taken as examples :—

At Keighley, diarrhœa is said to be "largely dependent upon insanitary "conditions in or surrounding the houses of our working classes. That "careless or unsuitable dieting, especially of children, is a frequent cause of "diarrhœa there can be no doubt, but other important and *preventible* causes "are decaying animal and vegetable matter lying in damp, unpaved backyards, "and in uncleansed gullies, and the highly offensive excreta tubs and privy "middens which may still be counted by the thousand in our Borough."

The medical officer of health of Normanton, speaking of diarrhœa prevalence, says :—"In the summer and autumn, in addition to the carbonic "acid we have the frightful heat of stifling unventilated rooms and the result "is heat-apoplexy and meningitis, of which sickness and diarrhœa are "generally in young children inveterate symptoms. At night, an open window "is as great a horror to some people as washing the middle of their backs is "to others. For growing children, and for all others in summer there should be "moderately cool and well ventilated rooms; in winter, moderately warm and "well ventilated rooms, but always ventilation ! !"

At Sandal, the medical officer points out the interesting fact that "Denmark Street again enjoyed the same immunity from deaths from "diarrhœa which I pointed out in my last report, and which I attributed to "the tar-macadamising of the streets and their consequent cleanliness."

Whooping Cough caused 443 deaths, equal to an annual death-rate of 0·29 per thousand,—a figure which is practically the average County rate for the previous five years. The disease was most prevalent in the latter half of the year, when several schools had to be closed in consequence. It is said to have reached epidemic proportions at various periods of 1898, in Handsworth, Holmfirth, Pateley Bridge, Queensbury, and Wath. At Holmfirth, the epidemic began in the early part of September, and the first cases were in the moorland part of the district. Dr. Trotter writes :—"I think that, "as is usual with this disease in our district, the infection was introduced by "children actually suffering from the disease being brought from other "districts, under the impression that moorland air is a specific for the "complaint."

The medical officer of health at Handsworth reports a somewhat similar experience :—"The mortality from whooping cough is no doubt much "increased by the carelessness of mothers in exposing their infected children "to cold. I believe it to be a general opinion of parents that children "suffering from this disease should be out of doors as much as possible; "there could be no greater fallacy."

Mr. E. W. Kemp advises the Castleford Urban Council "to include "whooping cough among the notifiable diseases, it being a highly infectious "and transmissible disease, and one which, in my opinion, notification would "assist in checking an epidemic at its outbreak.

Puerperal Fever claimed 39 lives during 1898, as compared with 57 in 1897, and 66 in 1896. It is to be hoped that the recent legislation as to midwives will enable this decline to continue satisfactorily.

Cancer.—It is a well-known fact that the number of deaths recorded under this head shows a progressive increase in recent generations. In the Registrar General's Report for 1897 (the latest available) it is stated that both the male and female death-rates from cancer in England were higher in that year than in any previous record. Unfortunately the statistics, which are usually comprised in the annual reports of the local medical officers, do not always record the deaths from cancer, but this year 100 of my colleagues have been good enough to append the cancer figures at my request. These 100 reports, representing a population of 873,339, make mention of 635 deaths attributed to cancer during 1898, equal to an annual death-rate of 0·73 per thousand. The following table is introduced to enable a comparison to be made with past years, though in doing so it is important to remember that improvements in medical diagnosis and other factors have doubtless assisted to swell the later records.

MEAN ANNUAL DEATH-RATES FROM CANCER.

England	...	1861-66	...	0·37
,,	...	1866-70	...	0·40
,,	...	1871-75	...	0·45
,,	...	1876-80	...	0·50
,,	...	1881-85	..	0·55
,,	...	1886-90	...	0·63
,,	...	1897	...	0·79
West Riding (part of)	...	1898	...	0·73

Commenting on the subject in the Kiveton Park report, Mr. Wills hopes "that means of prevention may follow through first ascertaining the cause by "careful observation in large numbers of cases in all localities and under "many conditions. At present very little appears to be known respecting the "origin of cancer, which, although it does not cause a high death-rate, inflicts "great suffering; there is a belief that the disease is hereditary, but that "belief also existed with regard to consumption."

Phthisis (or consumption of the lungs) was responsible for 1951 deaths, corresponding to a yearly death-rate of 1·3 per 1000, practically the same as in the past few years. In the rural districts the death-rate was only 1·1 per thousand.

There has recently been a large amount of attention devoted to the ravages of this disease, and the conditions under which it flourishes, with the result that it is now established beyond doubt that the spread of the disease is almost entirely due to causes which are quite controllable, *e.g.*, damp and dirty dwellings, lack of fresh air and sunlight, and want of care in dealing with infected persons, articles, and food supplies. With this knowledge daily becoming more widespread, and with a strict supervision of our milk and dairy cattle, we may confidently hope to see a further decline in the alarming death toll levied by the *bacillus tuberculosis*.

The reports for 1898 shew that the various medical officers of health throughout the County are fully alive to the importance of this subject, and the following quotations may be of interest:—Mr. Bailey, of Horsforth, thinks that their comparatively high phthisis rate is attributable to the fact that

" many of the older houses in the district are small, damp, and ill-ventilated, " and that comparatively few people yet understand the benefits of fresh air " and sunlight upon this dread disease. Overcrowding (not coming within the " limit to be dealt with by law) is frequently noticed, and it is unfortunate " that parents of large families do not yet grasp the fact that the securing of " a small rent is often not economy. The dusty occupations, viz. :—stone " working, iron and steel working, etc., at which many find employment, are " doubtless predisposing causes of this disease."

Dr. Richardson urges that the prevention of overcrowding and the provision of " dry, airy, and healthy houses to live in " is especially important for the people at Ravensthorpe who work in mills, " where they are confined " all day in a warm atmosphere, and consequently wear light clothing. When " a person goes out, the air in the mill yard is generally found to be keen and " one readily catches a cold. If the individual is at all strumous, and " especially if the sleeping accommodation at home is limited, the latent " germs find favourable conditions for developing, and cutting short the " patient's life."

The medical officer of the Leeds rural district affirms that " with air as " good as Seacroft air is, outside the houses, such diseases should be almost " unknown." But, he writes :—" Persons who breathe vitiated air the night " through, as the country workman's family almost always has to do, " necessarily have their powers of resistance to disease, especially tubercular " disease, diminished. Consequently you get deaths from respiratory diseases, " including tubercular disease of the lungs, in numbers far too great."

Mr. Knowles, in the Dodworth report, touches upon a phase of the subject which, since he wrote his report, has excited considerable attention. He says :—The question of the prevention of consumption and other forms of " tuberculosis has been very much in evidence lately. I would suggest that " your Council express their opinion on the desirability or otherwise of passing " new Acts of Parliament to provide for the County supervision or other " supervision of the milk, meat, and other food supplies, and the general " improvement and better housing of domestic animals. Such supervision to " be undertaken by competent and expert inspectors. I would urge your " Council to forward such opinion to the County Council, as it is only by such " expressions of public opinion that desirable reforms can be brought about."

With the additional aid afforded by the recent Amended Dairies, Cowsheds, and Milkshops Order of 1899, it behoves all sanitary authorities to vigorously enforce their powers for the frequent inspection of cowsheds and dairies supplying milk to the people, and to insist upon the provision of adequate air space, ventilation, and water supply, and especially to prevent the sale or distribution of the milk from cows affected with tuberculosis of the udder.

Mr. Jackson would like to resort to practical disinfection in the Wakefield Rural District. He writes :—" All houses where tuberculous patients have " died should be disinfected, and clothing and bedding treated as after an " infectious disease, but this cannot be done unless the disease is notifiable. " In your district is one block of seven houses inhabited by 28 people, in " which six cases of phthisis have occurred last year. From what information " I could gather, for many years past there have been deaths from phthisis in

"these houses, and families who have been previously healthy have developed "the disease on occupying them. The houses are drained and weather proof, "but being old have small windows and have no through ventilation, also "being built on a damp soil. Still, I believe if disinfection had been "compulsory after each case, the evil would have been much less."

The following extract from the Wetherby Rural report is encouraging :— "It is interesting to find the climate of the district suitable for the open-air "treatment of consumption, several cases treated in this manner during the "year have given very satisfactory results."

Tabes Mesenterica, or abdominal consumption. In connection with the interest which now attaches to the question of the transmission of tuberculosis by means of milk and food, I have endeavoured to arrive at some figures under the above head for the West Riding during 1898. The records show that tabes mesenterica is most fatal to children under five; and the term is often loosely used by practitioners for general wasting diseases of infants. Forty-nine of the reports before me, representing a population of 533,651, record altogether 166 deaths from this cause, corresponding to a rate of 0·31 per thousand. The latest published rate for England (1897) was 0·20 per thousand.

Respiratory Diseases (Tables I, II). As usual, bronchitis pneumonia and pleurisy, grouped together, accounted for the largest number of deaths, viz. : 4830. The death rate for 1898, was thus 3.3 in the urban districts, and 3.2 in the rural, or 3.3 for the County generally. This rate is in excess of the previous year, but not more than the averages of the last five years. The increasing attention which is being given to phthisis will, it is to be hoped, re-act favourably on this class of disease by the elimination of damp and unsuitable environments, and generally by the education of the people on matters of personal hygiene.

Although the figures under this head represent such an enormous loss of life, the medical officers of health have as a rule very little to say on the matter, beyond lamenting the profound ignorance which prevails among mothers as to the care of their offspring. At Keighley there were 182 deaths from respiratory diseases and of these 89 or nearly one-half were children under five years of age.

From Ravensthorpe, the following is reported,—"The number of deaths "from pulmonary diseases, that is pneumonia, bronchitis, and pleurisy, during "1898 was 43, which is more than three times that of the previous year. "We see that 37 of these deaths were due to bronchitis, five were from "pneumonia, and one from pleurisy. This great mortality from bronchitis is, "no doubt, due to the want of proper care being taken of children both with "regard to their clothing and also in allowing them to be exposed unneces- "sarily to severe weather. Another cause is due to the fact that a great "many deaths of children under five years of age although due to bronchitis "were indirectly the result of measles, for the number of deaths from "bronchitis were greatly increased during the time that measles was "prevalent."

At Thornhill also the number of deaths of infants from respiratory complications was increased by "the thoughtless cruelty and ignorance "displayed by many parents in the way they dress young children."

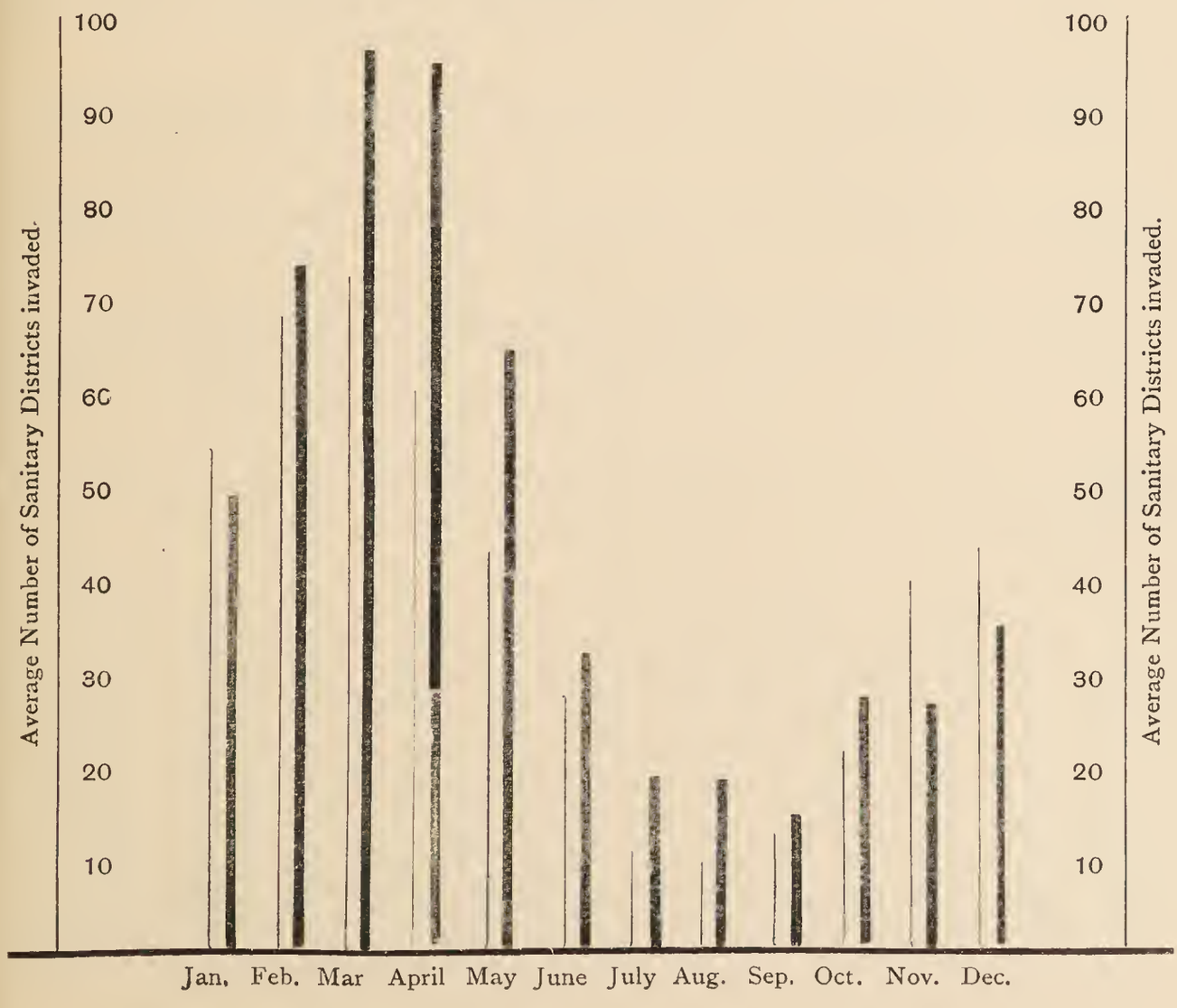
Dr. Russell McLean thinks that "the elevated and cold position of "Yeadon together with the waterlogged or damp condition of many of its "thoroughfares will continue to keep the respiratory death rate higher than "that of most other places of its size."

Influenza was more prevalent in the West Riding during 1898 than has been the case since 1895. As usual it reached its maximum in March and April, and its minimum about September. It does not appear to have been of so acute a type as in some years, but the statistics are somewhat indefinite and it is not easy to approximate the loss of life due to this disease, owing to the many complications which seem to follow in its wake. As Dr. Lawson says in his Hebden Bridge report,—"Although the acute stages "are not so dangerous as when it first appeared among us, still the nervous "break-down and the general debility which follows leave very serious effects "on the general community."

The following chart is based upon the returns received monthly from the various local medical officers in the Riding and serves to indicate generally the course taken by influenza during 1898 as compared with its average curve.

Influenza in the West Riding.

Thin columns = average of 7 years, 1891-7.
Thick columns = the year 1898.



Notification of Infectious Disease.—The nineteen Sanitary Authorities in the Riding who, when I wrote my last report, had not adopted the Infectious Disease Notification Act, have now been reduced to twelve, according to the following list :—

DISTRICTS WITHOUT COMPULSORY NOTIFICATION.

	Estimated Population.		Estimated Population.
Clayton West ...	... 1634	Shelley ...	... 1538
Emley ...	... 1497	Shepley ...	... 1827
Gomersal ...	... 3871	Skelmanthorpe ...	... 3600
Guiseley ...	... 4373	Thornhill ...	.. 10200
Knaresborough ...	... 4410	Thurstonland ...	... 889
Rawmarsh ...	... 13840	Whitley Upper ...	... 800

Happily, the preference of these Authorities for their present freedom from notification will not avail in the future, seeing that the Bill brought in by Sir Francis Powell with the object of making notification compulsory throughout the country, was passed, received Royal Assent on the 20th June, 1899, and will take effect in all the above-named places on the 1st January, 1900, if they do not previously adopt notification.

I have been making enquiries with regard to the cost of notification during 1898. The medical officers of health of 105 sanitary districts have very kindly informed me of the amounts paid during the year to medical practitioners for notifying cases of infectious sickness. The sum so paid in these 105 districts having an aggregate population of 878,000 was £740 5s. 6d., or one-fifth of a penny per head. For this trifling annual cost the immense advantage is afforded of early knowledge of the existence and spread of dangerous infectious disease.

The two Tables which follow are summarised from the County Notification Summary for 1898, and show the fluctuation of the diseases from month to month. The Notification Summary, which has been issued monthly by the County Council since 1891, gives the details with regard to each sanitary district.

10.—Monthly Totals of Reported Cases 1898.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Small Pox ...	—	—	1	8	5	—	2	1	—	1	—	—	18
Asiatic Cholera	—	—	—	—	—	—	—	—	—	—	—	—	—
English Cholera	—	—	—	—	—	—	—	1	—	—	—	—	1
Diphtheria ...	57	51	63	47	63	59	47	25	42	59	54	73	640
Croup ...	16	10	12	13	7	5	6	8	11	5	11	17	121
Erysipelas ...	98	99	97	75	84	68	66	54	66	85	99	113	1004
Scarlet Fever ..	525	489	485	383	347	376	363	358	368	661	569	513	5437
Typhus ...	—	—	—	—	—	—	—	—	—	—	—	—	—
Enteric Fever .	129	111	113	97	61	74	39	101	234	539	325	205	2028
Relapsing Fever	—	—	—	—	—	—	—	—	—	—	—	—	—
Continued Fever	5	1	3	3	3	4	5	4	14	14	3	9	68
Puerperal Fever	6	6	6	8	5	6	3	6	2	5	11	9	73

11.—Monthly Totals of Districts Reporting, 1898.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Small Pox ...	—	—	1	2	2	—	2	1	—	1	—	—
Asiatic Cholera...	—	—	—	—	—	—	—	—	—	—	—	—
English Cholera .	—	—	—	—	—	—	—	1	—	—	—	—
Diphtheria ..	25	22	26	21	25	21	27	17	24	36	29	32
Croup ...	10	10	10	11	7	5	6	7	9	5	7	12
Erysipelas ...	51	53	58	49	47	44	44	38	43	48	60	57
Scarlet Fever ...	84	82	87	86	69	73	74	72	73	85	81	82
Typhus ...	—	—	—	—	—	—	—	—	—	—	—	—
Enteric Fever ...	65	52	48	42	36	50	26	51	84	91	81	71
Relapsing Fever..	—	—	—	—	—	—	—	—	—	—	—	—
Continued Fever..	4	1	3	3	3	4	3	3	3	8	2	5
Puerperal Fever..	5	6	6	8	5	6	3	6	2	5	10	9
Measles ...	28	32	40	37	46	46	48	30	29	26	26	24
Whooping Cough	22	18	18	21	24	26	23	32	25	28	29	34
Diarrhœa ...	8	7	2	7	8	21	23	79	109	51	19	8
Pneumonia ..	41	42	52	55	38	36	37	25	18	42	33	43
Influenza ...	50	74	97	94	65	33	18	18	15	27	26	36
Chicken Pox ...	9	7	10	10	13	11	9	4	5	6	13	6
Mumps ...	3	7	11	8	4	3	2	6	3	6	4	7
German Measles	3	—	—	1	2	—	—	2	1	—	2	1
Lead Poisoning...	1	—	—	—	1	2	3	3	3	5	4	3

Adoptive Acts.—As just stated, the Notification Act will cease to be adoptive at the end of the year, and will apply generally throughout the country.

The Infectious Disease Prevention Act, 1890, however, only operates after voluntary adoption by the local authority. Table III. (see end) shows that some 75 sanitary authorities in the Riding have seen the value of its provisions and adopted the Act, the recent converts being Dodworth, Monk Bretton, Normanton, Rawdon, Rishworth, Royston, Sowerby, Springhead, Thurlstone, and Bowland R.

The Public Health Acts Amendment Act, 1890, is another adoptive Act, part 3 of which contains some exceedingly valuable sanitary provisions which have been embraced by some 90 authorities in the Riding (see Table III. at the end).

Isolation Hospitals.—In another part of this report I have dealt fully with the very active steps which in recent times have been taken towards providing proper hospital accommodation for each District in the Riding. Table III, column 2, shows that only a small portion of the County remains without such accommodation either completed or in immediate prospect. Abundant evidence of the inestimable value of proper hospital treatment and isolation may be gathered from the local reports for 1898 and there is clear statistical evidence of the increasing usefulness of these institutions.

Taking the figures for scarlet fever alone, we find that 29·6 per cent. of the cases were removed to hospital as compared with 16·2 per cent. during 1897. It may be added also that during 1898 the case-mortality was 4·1 per cent. as against 4·8 per cent. in 1897.

Dr. Scatterty in reporting to the Keighley Corporation shows that the public are each year realizing more the advantages of their hospital; and he provides figures which leave no doubt as to these advantages. Placed in tabular form they are as follows :—

	Treated at Home.			Removed to Hospital.		
	Cases.	Deaths.	Per centage of Deaths.	Cases.	Deaths.	Per centage of Deaths.
Scarlet Fever ...	24	3	12·5	96	2	2·0
Diphtheria ..	85	32	37·6	67	10	14·9
Enteric Fever ...	21	4	19·0	77	16	20·7*

Dr. Scatterty adds :—" Surely no further testimony is necessary to prove " the advantage of hospital treatment. Some may consider the maintenance " of an isolation hospital a heavy burden on the rates, but all must grant that " a life-saving institution, such as this, is one of the most valuable assets any " community can possess. The success of an Isolation Hospital, however, " does not depend upon the number of cases treated, nor even upon the " number of lives saved, but upon the number of cases of infectious disease " prevented. This, of course, no one can ascertain, but it is none the less " real because in the nature of things unknown."

" What wonderful testimony to the value of isolation hospital is this " disease " writes the medical officer of Ilkley in connection with scarlet fever. " Without ours, simple as it is, with our previous experience our mortality " should have been 24 instead of 3 for the past 10 years. This is no mere " theory, for the available statistics for the death rate from scarlet fever pre- " vious to 1879 are much worse than for the decade 1879 to 1889 which " have been considered. It is not without significance in this connection that " the number of cases of this disease admitted to our fever hospital exceeds " by 20 per cent. all other infectious diseases put together."

At Rawmarsh a similar experience with regard to the isolation of scarlet fever is recorded. " Forty-one cases from 34 of the houses were removed to " the Isolation Hospital. None of these proved fatal. The rapid improve- " ment in all the severe cases treated there was striking, and, I think, was " due chiefly to the increased air space and purer atmosphere of the hospital " (although its construction, &c,, cannot be defended) as compared with " private houses. Ten deaths were registered during the year as due to this " disease, a death rate of 6·6 per cent. of cases outside the hospital against " *nil* inside."

In the report for Bingley Outer it is pleasant to read that " the isola- " tion hospital at Morton has every characteristic of what such an institution " should be. Ambulance and beds seem ready at very short notice, and the " telephonic communications enable patients to go straight to warm beds.

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* This figure is somewhat misleading, as several cases were moribund when sent to the hospital and died a few hours after admission.

"The management committee with liberal views recognize that rapidity of "removal is a potent adjunct in preventing dissemination of disease. That "the public may appreciate this and act accordingly, I will give you some "data to go upon :—December 2nd 1897, scarlatina case removed to hospital, "no more cases occurred in the district till April 9th, 1898. Scarlatina: Three "cases in one house removed at once to Hospital, no more cases till July 30th, "1898. Scarlatina : three cases in one house at once removed to hospital, "no more until October 15–17. Scarlatina : five cases in one house all "removed to hospital, and no more cases till December 5th. Scarlet fever : "removed to hospital, and in 1898 we had no further cases in Bingley Outer "district. This same argument applies to typhoid. Three cases were "removed to the hospital, and there was no further outbreak."

The Keighley and Bingley Joint Hospital Committee also set an example. "The typhoid fever pavilion in connection with this hospital, to accommodate "eight beds, was completed in April last. The small pox wards, which are "iron buildings, were removed, from the old site, and re-erected upon brick "foundations on the new site acquired last year. An administrative block of "the same character has been erected, containing Matron's room, Nurses' "room, three bedrooms, kitchen, store room, &c., &c., and the whole has "been enclosed, by a boundary wall 7 feet 6 ins. in height. The buildings "were formally opened on October 12th last."

At the Mirfield Hospital the medical officer finds that "there is wanted "a convalescent room where the patients might be for a week or so before "they return home. There should also be a private ward. The place is "really too small. I think it would be cheaper to go in for a permanent and "larger building where more than one fever could be treated. As I have "said on a previous occasion to the Council, this hospital is doing a very "good work, but if larger, its scope of usefulness would be greatly increased."

Speaking of the home treatment of diphtheria the medical officer for the Wakefield Rural District writes: "The great wonder is not that so many "people die, but that so many get better, when in nine cases out of ten the "nursing, while well meant, is of the crudest description."

Disinfection.—In the West Riding almost every type of disinfecting apparatus is in use. Some reports draw attention to the inefficiency of hot air, while others urge that the process of burning and destroying infected clothing and bedding is wasteful and unnecessary when steam will produce the desired disinfection. In ten districts sums were paid for articles so destroyed during 1898, amounting in the aggregate to £29 11s. 0d. Some of the reports express sceptical opinions with regard to the reliance which in several districts has to be placed upon disinfection by sulphur fumes. It is admitted that for this method to be of any efficacy the article must be freely exposed to the action of fumes in every part. The supremacy of the best types of steam disinfectors is now universally acknowledged, and where these are in use they are characterised by the medical officers as pieces of "money-saving apparatus."

In several places a useful apparatus has been provided for spraying the walls of infected rooms with such germicides as chloride of mercury, &c.

Water Supply occupies an important place among the subjects dealt with in local reports under review, and several points are emphasised.

(1) The absolute necessity of an adequate supply of pure, wholesome water. (2) The scantiness of water is often a hindrance to sanitary progress, and a bar to extension. (3) In a growing population it is most difficult to maintain the purity of well water. (4) It is probably cheapest in the end to obtain the water from a public supply if within a reasonable distance.

Throughout the West Riding there is a vast amount of steady work being done in the extension of public supplies to hamlets and houses hitherto dependent upon unsatisfactory sources, and in other ways. The following is a list of some of this work recorded in the Reports for 1898.

Sanitary District.	*Improvements or Extensions.*
Ardsley East and West ...	980 yards mains.
Balby-with-Hexthorpe ...	147 houses supplied; 8 wells closed.
Barnoldswick	343 yards mains.
Barnsley R.	Main laid to Railway Terrace, Carlton.
Bishopthorpe R.	To Bishopthorpe from York Waterworks.
Clayton	247 yards mains, and 27 houses connected.
Darfield	15 old and 46 new houses supplied.
Denby and Cumberworth...	Mains extended to Toppitt.
Denholme...	12 houses supplied.
Doncaster R.	Works for Thurnscoe completed; 347 houses already supplied; 22 wells sunk.
Emley	Scheme for district supply sanctioned.
Farsley	Laying four new mains.
Flockton	Extensions to Six Lane Ends.
Gildersome	Larger pipe connected with Morley mains.
Goole R.	Eight cisterns provided.
Great Ouseburn ...	Two public bore wells sunk, one at Coneythorpe, one at Great Ouseburn.
Greetland...	529 yards 3 in. mains replaced by 6 in.
Guiseley	Mains extended 600 yards.
Gunthwaite-and-Ingbirchworth	18 houses supplied.
Halifax R.	Several small extensions.
Handsworth	Several extensions.
Harrogate Borough ...	Acquired by Corporation; additional works begun for enlargement.
Hebden Bridge	866 yards extension.
Hemsworth R.	Completion of scheme for supply of Hemsworth, S. Kirkby, S. Elmsall, Brierley, Shafton, S. Hiendley, Havercroft, and Ryhill. 1337 connections with main.
Holmfirth...	Mains laid to Totties.
Honley	Hall Ing supply improved.
Horsforth...	Gathering grounds much improved.
Hoyland Nether	One well closed and new supply provided.

Sanitary District.	*Improvements or Extensions.*
Hunslet R. ...	... Mains extended 440 yards at Middleton, 150 yards at Whitkirk, 57 yards at Woodlesford.
Ilkley	... Large extensions now occurring.
Keighley R. ...	... 75 yards mains at High Street, Steeton.
Kirkheaton ...	... 503 yards extension.
Kiveton Park R. ...	... New well at Wales.
Knaresboro' R. ...	... Extensions at Pannall, Killinghall, Pannal Ash, and Stonefall.
Netherthong ...	... 500 yards mains.
North Bierley ...	... 366 yards extension.
Oakworth ...	... 183 yards extension.
Oxenhope ..	... Supply piped to Lowertown.
Penistone R. ...	... 200 yards new mains at Upper Oxspring.
Pontefract R. ...	... Seven new wells sunk.
Queensbury ...	... Mountain supplied and 85 new houses.
Ripon City ...	... Mains renewed and extended.
Rothwell	... 1160 yards mains.
Sandal Magna ...	... 1624 yards mains.
Selby	... 225 yards mains.
Selby R.	... Six new wells made ; six old ones deepened and cleansed.
Settle R.	... 410 yards mains to Langcliffe and four standpipes erected.
Shepley	... Water main laid through village.
Skipton	... 560 yards mains.
Skipton R. ...	... Kettlewell water supply provided.
Sowerby	... 410 yards mains.
Tadcaster R. ...	... Eight wells sunk.
Thorne R. ...	... Six wells sunk.
Thornhill	... 100 yards mains.
Thornton	... 10 more houses supplied.
Thurlstone ...	... 10 more houses supplied.
Todmorden Borough	... 80 additional houses supplied.
Wath-on-Dearne ...	... Waterworks bought by District Council.

In spite of the yearly improvements chronicled, there is an equally long list of inadequacies remaining to be dealt with. Several of the deficiencies mentioned in the following list have figured in previous Reports, and ought to be immediately remedied :—

Sanitary District.	*Inadequacy.*
Ardsley	... Sometimes at Top End.
Barkisland ...	... At Slack, in summer.
Barnsley R. ...	... At Billingley, Notton, and Brick Row, Woolley.
Bingley Outer ...	... In outlying districts in very dry weather.
Birkenshaw ...	... Six houses in Nutter Lane.
Burley-in-Wharfedale	... During drought.

Sanitary District	*Inadequacy.*
Cleckheaton	... Quantity complained of in autumn.
Denby and Cumberworth...	Cottages on Firth Estate.
Doncaster R.	... At Sprotborough, Adwick-on-Dearne, Loversall, and Rossington.
Emley	... During drought.
Farsley	... From July to October.
Halifax R. ...	... Parts of Clifton, Upper Greetland, and Norland.
Holmfirth ...	... At Choppards, Longley, and Hillhouse.
Horsforth... ...	... During drought.
Ilkley	... Intermittent in dry summers.
Kirkheaton ...	... At Houses Hill, and Low Fold.
Lepton	... At Chapel Hill, Lydgate, Town End, and Town Bottom.
Monk Bretton ...	... Low pressure at high elevation.
Netherthong ...	... At Moor Lane.
New Mill	... At Hade Edge, Scholes, Victoria, and Fulstone.
Oxenhope... ...	... Public supply required for populous parts.
Penistone... ...	... At Cubley, Schole Hill, and Gravels.
Penistone R. ...	... At Thurgoland, Crane Moor, and Oxspring.
Pontefract R. ...	... At Fairburn and Brotherton.
Ripon R.	... At Galphay.
Rotherham B. ...	... Supply intermittent part of year.
Sedbergh R. ...	... At Hall Bank.
Shelf	... At Riding Hill and Lower Shelf.
Shelley	... At Shelley and Royd House.
Skipton R. ...	... Supplies wanted for Halton East and Appletreewick.
Soyland	... At Holly Royd and Lane Head.
Springhead ...	... At Upper Austerlands.
Tadcaster R. ...	... At Old Micklefield, Little Preston, and parts of Swillington.
Thorne R. ...	... At Waterside and Low Hill.
Thornton	... At Mountain.
Todmorden R. ...	... During dry weather.
Wetherby R. ...	... In many parts.
Wharfedale S. ...	... At New Adel.
Worsborough ...	... In higher parts during dry weather.
Wortley II. ...	... At Loxley, Houldsworth, and Stacey Bank.

It is surprising how frequently one hears the villagers extol the virtues of well-waters which are palpably polluted. It seems that a water which receives organic pollution may sometimes be drunk with impunity for long periods, but immediately some specific contamination enters by the same unguarded channels, serious mischief ensues. Dr. J. Mitchell Wilson, in his Balby Report, illustrates the necessity for careful supervision wherever the supply is derived from wells. Of twenty such waters analysed he found two satisfactory, seven less pure, and eleven seriously polluted. At Knottingley,

sixty samples of well-water were found to be contaminated out of ninety-one examined. There, however, the public supply is being speedily introduced, and to this the Medical Officer attributes the marked decrease in the diarrhœal mortality.

At Horsforth, the Medical Officer considered that the scarcity of water played a part in the excessive zymotic sickness by rendering it impossible to properly flush the sewers. He adds:—"The supply for the whole year has "been very defective. This has been due mainly to the exceptional drought "of the seasons causing great scarcity. Leakages being suspected, many of "the mains have been examined for such, and there is no doubt that the "leakages found have contributed, in a minor degree, to the above state of "affairs. Fortunately, the Water Company were able to take advantage of "their connection with the Yeadon supply, and thus the township did not "suffer to the extreme degree it otherwise would have done. . . . During "the year the Water Company have done many things which must have a "beneficial effect in improving the purity of the water. These have been "chiefly the following:—(1) Cutting off the valve connecting the compensa- "tion reservoir with the mains; (2) improving the conditions at Bayton Beck "in order to prevent pollution from road washings; (3) taking better care of "the tilling of the gathering grounds, preventing the use of night-soil; and "(4) cleansing and protecting some of the feeders from the intrusion of "cattle. There is no doubt that the stream at Bayton Beck would have been "better protected had the pipes used been whole ones, and in times of floods "it seems possible for the road washings still to reach the beck, if for any "reason the grate provided should become blocked up." Mr. Bailey concludes by adding that "there is now every probability of the water supply being in "the hands of the Sanitary Authority (The Horsforth Urban Council) in a "short time to come."

Dr. R. E. Williamson (Wharfedale N.) reports that he found the water supply of Nesfield in grave danger of contamination, and he also regrets the absence of an adequate supply for Brearey Arthington.

The Medical Officer of Health for Shelley writes:—"In my last Annual "Report I had to record two outbreaks of typhoid fever which, in my opinion, "were caused by the defective water supply, and I then commented, not only "on the bad quality of the water, but also on the fact that it had to be fetched "from an unreasonable distance. Later in the year I wrote a Special Report "on the subject at the request of the Local Government Board. So far, to "the best of my knowledge, there is no mention of anything being done to "remedy the evil."

The water supply of the villages in the Goole Rural District is far from satisfactory. "The long continued dry weather of last summer and autumn "showed how unsatisfactory a source of supply rain is when it has to be "collected from the roofs of cottages, and stored in small cisterns, or only in "tubs. Notices were, however, served as to 115 houses in Swinefleet where "no cisterns were provided. In eight cases cisterns have since been made, "and at present no other water is available for drinking, cooking, &c. The "same want was felt more or less severely in all the Marshland parishes. A "sample of well-water was analysed; it was considered to be good, but the

" results were not satisfactory. In Hook also there is a similar scarcity, the " only provision is rain water, the well-waters are not usable. While inspecting " at Rawcliffe Bridge district, complaints were made of the long distance " water had to be carried by tenants of some of the new houses. At another " group of houses a large collection of decaying refuse was seen quite near " the pump, another pump was broken, and a pool of dirty water stood near " to the third. These are some of the causes by which well-waters become " impure, and the tenants are negligent in permitting them to continue."

The Medical Officer of Health for Holmfirth affirms that the Wheelsbrook stream (one of the feeders of their reservoir) is unquestionably liable to pollution by cattle, road washings, &c. In consequence of his Report on the subject, the stream was shut off from the reservoir, and Dr. Trotter writes .— " I recommend that it should continue to be so."

During the greater part of 1898, Rotherham was supplied with water from Sheffield, instead of from its hitherto unsatisfactory sources, and it is gratifying to read in Dr. Robinson's Report that as a consequence " there " has been a marked diminution in cases of enteric fever, in fact, the smallest " number recorded for several years past. Compared with the previous year " (1897) the numbers are 60 as against 91."

Lead Poisoning.—Happily, most of the larger public supplies which exhibited plumbo-solvent action are now subject to some more or less efficient corrective treatment before being distributed through leaden pipes. The following list is a *precis* of the remarks of the various Medical Officers for 1898 :—

Sanitary District.	*Action on Lead.*
Baildon	Slight.
Barnsley Borough ...	Some.
Barnsley R.	At Cudworth and Stainborough.
Batley Borough	Slight.
Clayton West	Yes.
Denby and Cumberworth...	Yes.
Gildersome	Decreased.
Golcar	Yes.
Halfax R.	Varying action.
Handsworth	Very slight.
Hebden Bridge	Slight.
Heckmondwike	After standing in pipes.
Linthwaite	Yes.
Mirfield	Decreased.
Monk Bretton	Very slight.
Morley Borough	Slight.
Northowram	Slight.
Ossett Borough	Marked action.
Pontefract R.	Some supplies act occasionally.
Rawdon	Slight.
Rishworth	Slight.
Roystone	Slight.

Sanitary District.	*Action on Lead.*
Shelley	... Yes.
Shepley	... Yes.
Shipley	... Slight
Skelmanthorpe ...	... Yes.
South Crosland ..	... Slight.
Southowram ...	... Slight.
Todmorden Borough	.. Some supplies act.
Worsborough ...	... Some.
Yeadon	... Yes.

At Morley:—"It has been necessary to treat all the water going through "the main, as in previous years, with carbonate of soda to counteract the "plumbo-solvent action. This has proved efficacious, the action on lead "being reduced to a minimum, and very few cases of lead poisoning have "been reported during the year."

At Gildersome, "The lead-solvent action of the water has greatly "decreased, though during June and July the Medical Officer of Health "noticed a few cases of lead-poisoning, but these occurred chiefly among "people who had previously suffered from the disease, and were therefore "very susceptible to the poison."

At Keighley it is reported that "The daily addition of lime completely "neutralises the acid derived from the peat, and consequently prevents its "natural plumbo-solvent action."

The water which is supplied to Northowram from the reservoirs of the Halifax Corporation "has some solvent action on lead, and during many "months of the year has been most unsatisfactory, containing quantities of "deposit which render it quite unfit for domestic consumption. . . There "have been fewer cases of lead-poisoning during the past year."

The Medical Officer of Health for Todmorden writes as follows:—"So "many of the waters in our district having been proved to have lead-solvent "properties, I think it incumbent on the Corporation to enforce strict regula- "tions against the use of lead pipes for the conveyance of water for domestic "use, excepting the short lengths of service pipes that are absolutely "necessary, and insist on these being protected against the lead-solvent "properties of the water as far as possible."

Mr. Greenwood, of Ossett, reports that "cases of lead-poisoning continue "to occur at intervals, though I am pleased to say that they are not so "frequently met with as formerly. I have, however, recently seen a case of "lead palsy, due to drinking water. A sample of water taken at mid-day "from the house of the person in question was found to contain an appreci- "able quantity of lead. I again urge the Sanitary Authority to consider "whether it is not their obvious duty to do what is in their power to mitigate "the plumbo-solvent properties of a water which in all other respects is of "most excellent quality."

Drainage, Sewerage, etc.—The conditions of the drains and sewers of any district is of vital importance to the welfare of the inhabitants. An enormous degree of activity has prevailed in the West Riding during recent years in the direction of rectifying or replacing the old system. The following tabular statement gives some idea of the numerous extensions and improvements recorded in the annual reports for 1898. Besides these, there are many large and complete schemes of sewerage and sewage disposal on hand, as will be evident from the number and amount of the loans sanctioned for this purpose in recent years (see table on page 58).

Sanitary District.	Improvements effected or undertaken.
Ardsley, East and West	3520 yards of new sewers.
Baildon	Tong park sewer constructed.
Balby-with-Hexthorpe	1252 yards of new sewers.
Barkisland	Slack scheme completed.
Barnoldswick	250 yards new sewers and 175 houses connected.
Birstal	500 yards new sewers.
Calverley	209 yards new sewers.
Clayton	442 yards new sewers.
Denby and Cumberworth	174 yards new sewers at Upper Cumberworth.
Goole Rural	160 yards new sewers.
Greetland	486 yards of sewers relaid.
Holme	Holme banks sewered.
Holmfirth	485 yards of sewers laid and repaired.
Hoyland Nether	559 yards of new sewers, and 130 yards relaid.
Hunslet Rural	1210 yards new sewers at Middleton; 209 yards at Woodlesford.
Idle	290 yards new sewers.
Ilkley	Complete system for Ben Rhydding.
Keighley	1310 yards new sewers.
Keighley Rural	4059 yards new sewers at Morton Banks and E. Morton.
Knaresborough Rural	2500 yards new sewer at Bilton.
Lepton	86 yards new sewers at Gawthorpe.
Methley	370 yards new sewers.
Monk Bretton	Smithies sewerage completed.
New Mill	350 yards new sewers.
North Bierley	400 yards new sewers.
Oxenhope	100 yards new sewers.
Pateley Bridge Rural	Branch sewers at Pateley Bridge, Bewerley, and Glass Houses.
Pudsey	980 yards new sewers.
Queensbury	2230 yards new sewers.
Rawmarsh	400 yards new sewers.
Sedbergh	Dent sewerage completed.
Selby	1432 yards new sewers.
Selby Rural	1186 yards new sewers.
Settle Rural	812 yards new sewers at Newby, 3518 yards at Long Preston, 1608 yards at Clapham.

Sanitary District.	Improvements effected or undertaken.
Shelf	.. 1062 yards new sewers.
Silsden	... 1474 yards new sewers.
Soothill Upper ...	... 30 yards new sewers.
Sowerby Bridge ...	... Town's sewerage completed.
Soyland	... 600 yards new sewers.
Thorne Rural ...	... 280 yards new sewers at Hatfield, 220 yards at Thorne.
Thornhill	... 5100 yards new sewers.
Thornton	... 263 yards new sewers.
Todmorden Rural	... 200 yards new sewers at Blackshaw Head and Oak Villas.
Wath-upon-Dearne	... 580 yards new sewers.
Wombwell ...	... 7650 yards new sewers.
Yeadon	... Warm Lane sewage completed.

In spite of the progress recorded above, there is much remaining to be done. In most villages some defects are to be found. One often finds leaky surface drains connected to sewers and doing duty as house drains. No doubt the leaky construction of many house drains is due to the idea of draining the site also, the owner little thinking of the ultimate danger.

Several reports (*e.g.*, Birstal, Burley, Otley, Ravensthorpe, Wombwell, and others) call attention to the defective ventilation of the sewers, and this defect is characterized as an active agent in zymotic mischief. The absence of means for the proper flushing of the sewers is also much felt in several places, while in others the use of flushing apparatus has been efficacious in keeping the sewers free from deposit.

In sparsely populated districts the use of cesspools is resorted to, and nuisances arise which might, in many cases, be averted by a little attention on the part of the tenant. Any conservancy of filth, however, is insanitary, and the best method is to provide a proper system of sewers wherever practicable. The following table exhibits a number of deficiencies noted in the reports under this head :—

Sanitary District.	Inadequacy at
Baildon	... Baildon Green and Green Lane.
Barkisland ...	... Mill Fold and Bank Bottom.
Barnsley R. ...	... Cudworth and Carlton.
Birkenshaw ...	... Nutter Lane.
Bishopthorpe R. ...	... Dringhouses.
Bowland R. ...	... Waddington and other villages.
Burley-in-Wharfedale	... Elm Grove.
Elland	... Upper and Lower Edges.
Holmfirth	... Totties, Underbank, New Mill Road, Scarfold.
Honley	... Deanhouse, Oldfield, Hall Ing.
Hunslet R. ...	... West Street, Woodlesford.
Idle	... Thackley.
Keighley	... Westgate.
Kiveton Park R. ...	... Woodsetts, Todwick, and Kiveton Park (Wales).

Sanitary District.	Inadequacy at
Meltham	... Mill Moor.
Mirfield	... Upper Hopton.
Netherthong ...	... Moor Lane.
New Mill	... Scholes, Jackson Bridge, Hepworth.
Normanton ...	... Snydale end of district.
Oakworth	... Stanbury and Laycock.
Ossett B.	... Part of Gawthorpe and Healey.
Penistone R. ..	... Silkstone, Crane Moor, Norcroft, and Langsett.
Rishworth ...	... Cunning Corner.
Ripon R.	... Kirby Malzeard and Grewelthorpe.
Rotherham R. ...	... Swallownest, North Stavely, Tinsley, Treeton, and Aston.
Rothwell	... Patrick Green.
Settle R.	... Airton, Scosthorpe, Burton, Austwick.
Soyland	... Spring Street.
Thornton	... New Road.
Tong	... Westgate Hill and Holme Lane.
Wakefield R. ...	... Crigglestone, Stanley, Crofton, Walton, Sharlston, Warmfield.
Wharfedale S. ...	... New Adel.
Wortley I. ...	... Tankersley and Chapeltown.

Steps have been taken at several places to secure efficient ventilation of the sewers. At Guiseley, in consequence of complaints, the head of the sewer was connected with the chimney belonging to the Waterworks Company, "with very satisfactory results."

At Menston also, "complaints were made of the escape of sewer gas "from the manholes, and a Committee of the Council made an inspection of "the same and recommended the erection of ventilating shafts."

Mr. Bailey of Horsforth in his 1898 Report writes: "There has been "one elevated ventilator put up at the top of the north end of Broadgate Lane. "I would recommend an increase in this form of ventilation, especially at "junctions of streets where people congregate, or near schools where the "children playing over the open grates must inhale the foul sewer air."

It would be to the advantage of Yeadon, Dr. McLean thinks, "to have "one of the Council's servants to attend to the cleaning out of all the dishes "and gullies in the town, as even many of those which appear clean on the "dish top have the trap filled more or less with semi-solid matter."

"The inspection chambers in the main sewer between Providence Place, "Rawmarsh, and the Little Bridge, in Greasboro' Road, Albert Road, and "Victoria Road, require immediate alteration," writes Dr. Picken. "At "present they are practically square catchpits filled with excrement, &c., "through which the liquid sewage has to find its way to the outlet. The "smell on uncovering one of these chambers is almost overpowering, and it is "no wonder complaints of sewer gas are frequent. With sewers in this state, "and many old drains with bad joints leading into them, the danger to health "is too obvious. The flat bottom of these chambers ought to be at once "channelled, with the invert of the same diameter as the sewer, so as not to

"interfere with the velocity of the current, and so prevent deposits. Ventilating "shafts and means for flushing are required at the heads of many of the "streets, and regular flushing and inspection of sewers are much needed."

A condition of affairs was discovered in the neighbouring district of Mexborough which, it is to be hoped, is unique. Mr. Twigg reports: "The "main sewer was completely blocked up at the beginning of the year, and a "length of just over 2283 feet produced 30½ loads of sand and silt in January "alone."

The medical officer of health of Cleckheaton suggests that "attention "may with advantage be publicly called to the great difficulty which the "sanitary officials, even with the utmost vigilance encounter when contractors "and workmen, in laying house drains, omit to give notice according to bye-law "before proceeding to cover up such drains. In one detached house to which "my attention was called, the main drain was discovered to be laid with a fall "actually *towards* the house, the pipe junctions apart, and soil-pipe matter and "sewage infiltrating the cellar."

Sewage Disposal as a means of preventing the pollution of streams is now a matter which is being actively dealt with in the Riding by the Rivers Board; but the West Riding Sanitary Committee have still a very important interest in this question in so far as the method of disposing of the sewage of a district has, apart from questions of river purification, a direct bearing upon the health of the inhabitants and, if improperly carried out or neglected, may become a positive nuisance. For example, Mr. Bennett, in the Otley report, writes:—"The Burley and Menston sewage works which are in our district "have given rise to a most objectionable stench."

At Queensbury, Mr. Peck urges the Council to abolish the meter system of supplying the inhabitants with water as "one step towards curing the "offensiveness at the sewage works of which we have heard so much during "the past year."

The medical officer of health for Holme after commenting on the various ways in which their sewage is dealt with, says:—"To simply turn it on to the "land and leave it there must in time cause a serious nuisance."

Scavenging.—In 53 sanitary districts the systematic removal of the household refuse, etc., is undertaken by the direct staff of the Sanitary Authority; in 37 other districts the duty is delegated to some person who contracts to do it regularly; and in the remaining districts the owners and occupiers of premises are presumably left to do their own scavenging.

It would be true I think to say that almost half the trouble of many sanitary departments arises in connection with this important sanitary necessity. In a number of reports, disease and sickness is associated with absence of systematic scavenging; and daily experience corroborates this relationship. Speaking generally, a passing observer can easily tell where scavenging is left to the tenants and owners; and even where the work is let to contractors it is almost invariably less satisfactorily performed than by the servants of the Council. Some medical officers have kindly furnished me with particulars of the cost of scavenging, and I find that in the urban districts it varies from 7¾d. to 11¼d. per head of the population per annum.

The opinion of the medical officers may be gathered from the following brief extracts from the 1898 reports :—

Horsforth.—"It has been proved that the system of giving individual "notice to the scavengers does not answer, and I hope that this important "work will, before long, be done much more efficiently, for the contents of no "ashpit should be allowed to accumulate for longer than six weeks."

Golcar.—"I am quite of opinion that the work could be much more "satisfactorily done if you were to undertake it yourselves, under such "efficient superintendence as would ensure its being regularly and systemati-"cally attended to."

Drighlington.—"The scavenging has been done by contractors, and is "a great improvement on the old system, but in some cases the contractors "have not always carried out their agreement as promptly and orderly as one "would have wished. This work wants well supervising by the inspector."

Rawmarsh.—"We have had another year's experience of the removal of "nightsoil and rubbish on the contract system. The record is much the "same as usual, only worse than when the work was is in the hands of the "previous contractor. Refuse has been deposited where it was a nuisance; "there have been many urgent complaints from householders; ashpits over-"flowing often for weeks; carts and men put on by the sanitary inspector to "overtake the work."

Rothwell.—"The emptying and disinfecting the ashpits and privies "continues to be done by your own sanitary staff, and the removal of the "contents is done by contract. On the whole this arrangement is fairly "satisfactory. Your sanitary committee have arranged to have all the ashpits "in your district numbered, and a record is to be kept of the dates on which "each ashpit is emptied, and by this means it is hoped that any neglect on "the part either of your own sanitary staff or the contractor will be "prevented."

Closet Accommodation.—The reports for 1898 make record of the erection or re-construction of 5801 closets in the Administrative County during the year. The type of closet in use often has an important bearing on the public health, and I have therefore been at some pains to find out the kinds adopted in 1898. I am only able to classify 5142 of the new closets, and these are distributed as follows :—

Water-Closets	2007
Waste-water or Slop	1027
Trough	11
Dry Earth	170
Pail	168
Privies	1759

It is encouraging to note the growing popularity of the water-closet. The privy midden system, as in previous years, comes in for strong and increasing condemnation. One report, with which I agree, denounces this system as "the greatest blot on our sanitary administration." It is to be hoped that the Thurlstone Council have by this time remedied the disgraceful

conditions recorded in the Annual Report of their Medical Officer. He says:—"At the house opposite Hazelhead Tavern there is no seat to the "privy, and it has been in this condition for a long time. In Coldwell's Fold "there is only one closet to four houses. It was in such a tumble-down state "that when it rained no one could use it without an umbrella, and at last the "roof fell in just as a woman had left the place. Such a case as this "requires that the owner should be firmly dealt with if he does not at once "build a new privy according to the by-laws of the Council."

The gradual abolition of the privy midden system at Barnsley is making steady progress, but Dr. Sadler sets forth the difficulties which stand in the way of more rapid strides; first, "the legal difficulty in insisting on any "special form of closet, which can probably only be overcome by pecuniary "assistance in one form or another being given, as in many towns, to owners "converting their conveniences, the Corporation looking for their return in "the diminished cost of scavenging, as well as the improvement in sanitary "conditions. Then there is the fact that we have probably not yet reached "the best form of waste-water closet, the main defect being, that in the form "usually adopted the water flush does not cleanse the tube leading down to "the soil drain, whilst the ordinary water-closet is of too delicate construction "for many of our rougher quarters, not suitable for outdoor use in the severe "frosts with which we are so often visited, and using more water than we can "afford until our new reservoir is completed. The decrease in the number of "privy middens, notwithstanding the increase of the population, has made it "more easy to keep them in proper order, and has diminished the complaints "of nuisances from the tips."

General Sanitary Work.—Perhaps the following figures as to nuisances, summarised from the 1898 Annual Reports, will help to show what activity prevails in the Riding, and at the same time what a vast amount of work there is always ready at hand for the officers of the various sanitary authorities:—

Number of nuisances remaining unabated at close of 1897		1,488
Number of nuisances remedied during 1898	...	16,009
Number remaining on hand at close of 1898	...	1,498

I have abstracted other gross totals from the reports illustrating the same praiseworthy activity. For example during the year no less than 4,400 sink waste-pipes were disconnected from the house drains; while 3,750 were newly supplied with proper traps. But great as is the record of work done, that which waits to be done is far greater. Systematic house-to-house inspections are said to be made in some 92 districts, and should be instituted periodically in every district to reveal the dangerous conditions which otherwise are unnoted until mischief has been done.

At Flockton, "out of 126 houses visited 26 had no sink pipes at all; "34 had sink pipes in direct communication with the drains, and 5 were "otherwise, in a condition dangerous to health, but some of these have been "since remedied. The 26 houses without sink pipes are in other ways some "of the best property in the district."

At Sharlston and also at Flockton complaint is made that some of the tenants cover up, or box over, the sink pipe disconnections in order to prevent the wind blowing up the sink pipes. This should not be allowed, and would not be done at all if a syphon trap were fitted to the waste pipe inside the house.

A house-to-house survey of the village of Stanbury, undertaken by the medical officer of the Oakworth Urban district afforded typical results from which I extract the following items :—

Sink pipes connected directly to drains	...	...	33
Ditto properly disconnected	...	...	10

Dr. Atkinson adds that "some of the defects found during the survey "have already been remedied."

Paving of Streets and Yards.—The condition of roads and streets has an important effect upon the public health, while as to back yards and courts, if these are not properly paved and drained they soon become insanitary from the accumulation of stagnant water, garbage, etc., and their uncared for condition inevitably tends to encourage foul nuisances.

"The condition of the paving of the common yards was examined" at Doncaster "and many defects reported to the Sanitary Committee. The high "per centage of deaths among young children living in these yards" says Dr. Mitchell Wilson "is good evidence that there is need for more improve- "ments."

According to the medical officer of Yeadon,—"Some of the private streets "are more like quagmires than ever (if that is possible). Apart from many "of them being a source of danger to life or limb from an accident, they are "certainly conducive to bad health, both as regards the effect of the water— "sodden ground around the foundation of dwellings, and also on account of "the impossibility of walking over some of them without getting wet or damp "feet. This last is an important point to mill workers who have perhaps to "spend the rest of the day on cold floors in the mills and also to the children "at our schools, many of whom I am sorry to say are not too well shod. I "believe many chest affections are started in this way."

The medical officer for Gildersome again urges that a wet and muddy road alternating with a dry and dusty one is a serious danger to health. At Sandal, as mentioned elsewhere, Dr. Williamson attributed the conspicuous immunity from diarrhœa, enjoyed by a certain street, to the fact of its tar-macadam surface and its consequent cleanliness.

Dr. Castle, of Darfield, suggests "that it would be wise to use the road "roller more, and more systematically, and in making new roads to employ "some medium, such as pitch, to assist in binding the stones together and so "forming a waterproof surface where houses face on to the roadway."

Dwellings.—Although the reports do not pretend to give complete information on the subject, record is made of the erection during 1898 of no less than 5,519 new houses (4,027 in the urban districts and 1,492 in the rural districts of the Riding). These new houses, it may be assumed, have been erected to meet the needs of the growing population, and not in any notable degree for the purpose of replacing the vast number of old and

dilapidated houses which are to be found in many parts of the Riding. It is recorded in the Annual Reports that systematic house-to-house inspection is undertaken in 75 urban districts in the Riding, and also in 17 of the rural districts.

One of the most serious of all sanitary evils is that which arises from the occupation of houses which, originally badly constructed, have by the lapse of time and by neglect become so dilapidated as to be unfit for dwellings. Some are unhealthy because of the site, the floor of the living-room being laid immediately on the undrained soil, and with the back wall abutting directly against a bank of earth. As regards structural defects they are to be found of every conceivable description—roofs that are not watertight, fixed windows, or with only a small pane made to open, dampness, want of eave-spout, insufficient light and ventilation, dilapidated floors, roofs not under-drawn, &c. Add to this the frequent deplorable insufficiency of sleeping accommodation, absence of bath or other adequate provision for personal cleanliness, and it is evident that a large number of the poorer classes exist where the requirements alike of sound health and ordinary decency are set at naught.

It would be easy to multiply examples from the 1898 Reports, as indicated by the following brief extracts :—

Thurlstone.—"Many houses are in an unsanitary condition owing to "dampness caused by the walls wanting pointing outside, and in many cases "because the ground floor is on one or two sides below the surface of the "ground. Another cause of dampness is that wash kitchens and cellars in "many cases have the floor in such a bad state that the water simply runs "into the foundation, or stands about instead of running down the drain. "This is a matter that should be attended to."

Holmfirth.—"The great faults of many of the houses in this district "are dampness and badly ventilated and, in some cases, overcrowded, bed-"rooms. The cause of dampness is often that the houses are built into the "soil. There are many rows of houses where an upper row faces on to a "public road on one side, and a lower row faces on to a lower road on the "other side, the top of the lower houses behind beginning at the upper road "level ; in such cases the lower houses must inevitably be damp to some "extent, and there can be no through ventilation."

Soothill Upper.—"The crying want of our time is more bedrooms, "where we spend one-third of our existence. The crusaders against con-"sumption, praiseworthy as there object is, in my opinion have got hold of "the wrong end of the sanitary problem. What use is it to cure people in "an airy sanatorium, and then send them back to their old haunts and homes ? "Better to instruct and encourage that every home should be a sanatorium, "so that every person may have as much and as pure air as it is possible, "from the cradle upwards."

Kiveton Park R.—"It is difficult to know how to deal in the best way "with dilapidated old property that has neither spouting, drainage, nor any-"thing necessary for the health and comfort of the tenants."

Knaresborough.—"Instances have come before your Council, of houses "which in past years have been closed by the then Sanitary Authority as

"unfit for habitation, having again crept back into occupation. To prevent "this occurring in the future, houses, which by their situation and construc- "tion can never be fit for habitation, should, after due notice to the owners, "and the lapse of the necessary time as provided by the Public Health Act, "be pulled down, and thus remove an eyesore, which an unoccupied and "tumbledown house must always be, and the temptation to the owners to "allow re-occupation."

But it is not alone the old houses that give trouble to medical officers of health. "At Kirkwood (Penistone), four new houses have been constructed "without, so far, any provision for drainage whatever, cesspool or otherwise, "and the fluid simply runs on to the surface of the ground."

At Gildersome, "the erection of eight new houses has been completed. "Six of these houses are, I regret to say, built back-to-back; a condition of "affairs which is most insanitary, and a direct breach of the bye-laws."

At Rawmarsh, newly-erected cottage houses are anything but satisfactory. The medical officer reports:—"The great majority of their covered ashpits "are unventilated, and give rise to much complaint. Some of the backyards "are most objectionable. With the exception of a few feet from the back "doors they are unpaved, and receive all kinds of rubbish thrown on to them "by the tenants to keep them dry. Although the houses are occupied, fall- "pipes are unfinished, and some finished ones discharge on to the surface to "saturate the soil and make the conditions still more unhealthy. There are "two blocks—one in Ashwood Road and one on the site of houses demolished "three years ago in Moxon's yard—which are a disgrace to somebody. In "the former, during wet weather, rain finds its way through a good many of "the bedroom ceilings, and drops on to the floor so freely that, as one tenant "told me, they have to keep shifting out of one room into another. The "kitchen floors of others are so damp as, in my opinion, to be uninhabitable. "The plans of the block in Moxon's yard were objected to by your late "Surveyor, as they were contrary to your old bye-laws. The backyard of "these houses is bounded on the greater part of its length by the high back "wall of old property belonging to Earl Fitzwilliam. Against this wall are "built blocks of coalhouses and w.c.'s, which leave only eight and nine feet "between them and the back doors. The west end of the yard is blocked up "by a house facing into High Street. There is neither sufficient sunlight, "ventilation, nor airspace."

In the Hemsworth Rural District 163 new houses have been built during 1898. The medical officer says:—"They are usually of the colliery type of "house, built in rows, little attention being paid to their surroundings, many "of them being of a speculative character. Whilst erected under the existing "bye-laws, it is only in a few instances that the backyards are paved. . . . "In the erection of these rows of houses, built exactly alike, no names are "given to them, nor are they numbered, causing great inconvenience."

Overcrowding.—In a goodly number of reports mention is made of solitary instances of overcrowding of persons in houses; and in some cases the evil is reported as now remedied. A few cases of overcrowding are said to exist at Brighouse, Penistone, Pudsey, Ripon, Rotherham, Thurlstone,

and Woodlesford. A case of diphtheria was investigated in an insanitary house at Smithy Place, Honley, where two adults and five children occupied one badly-ventilated bedroom of only 1,500 cubic feet capacity.

The overcrowding of houses on area, by being clustered together in a badly-arranged manner, is noted in the older parts of Dodworth, and at Pudsey, Rotherham, and Seacroft.

The Housing of the Working Classes Act provides the machinery for dealing with those small congested areas where the houses are unfit for habitation, or where the bad arrangement of the streets and dwellings interferes with light and ventilation, or otherwise causes a danger to health. Under this Act it is the duty of the medical officer of health in such cases to make an official representation to his Authority. Action of this kind was taken at Keighley and in the Wakefield Rural district during 1898. In the Thurlstone report Mr. A. C. J. Wilson writes :—"At Rotcher all the "property is in a bad sanitary state, and the houses are scarcely fit for human "habitation."

Schools often play an important part in the spread of infectious disease. The closure of schools in the West Riding as a means of arresting contagion was resorted to on 114 occasions during 1898, the average duration of closure being over three weeks in each case.

The sanitation of schools is a matter of prime importance, and should be unimpeachable, so as to safeguard the health of the scholars, and at the same time impart to the rising generation a hygienic object lesson. For these reasons, as I stated in my last report, no school ought to have closets of the privy-midden type. Yet a great many of them in the West Riding retain this system, which is especially offensive in connection with such institutions. Dr. Hunter succeeded in bringing about an improvement at Pudsey. He gives his views as follows :—"The privy-midden system in schools is intolera-"able. It is indecent, disgusting, and altogether inconsistent with the "hygiene taught in the schools. It is undoubtedly a danger to the health of "the scholars. Some of the users of the closets may themselves be suffering "from undetected infectious diseases, or may come from homes where "infectious disease exists. As there are no ashes to cover the excreta, it is "the dangerous custom in some of the schools to put the sweepings from the "floors of the schoolrooms into the middens. As these sweepings may con-"tain the germs of scarlet fever, whooping cough, measles, consumption, the "spores of ringworms, &c., &c., the danger of such a procedure is obvious, "and it should on no account be permitted. The Pudsey School Board, "recognising the evils of the midden system, have, as a beginning to the "work of reformation, abolished the privy-middens in the Greenside School, "and substituted an entirely new system of water-closets, urinals, and "drainage. The change for the better cannot fail to be appreciated, and I "trust the unhealthy conveniences of the other schools will be speedily dealt "with in a similar way."

By-Laws relating to one or other subject are said to have been recently adopted or amended by the following Authorities :--

Ardsley	Handsworth	Selby
Ardsley E. & W.	Hipperholme	Skipton R.
Barnsley R.	Keighley B.	Tong
Clayton	Knaresborough R	Warley
Darton	Ossett	Wharfedale R.
Featherstone	Rawmarsh	Wombwell
Greasborough	Ripon City	

Complaint is made that the existing by-laws in some districts are not systematically enforced in all respects—Baildon, Darfield, Holmfirth, Soothill Nether, Thurlstone, Yeadon and others.

The want of proper by-laws is felt in many districts and ought to be attended to in the following places :—

Sanitary District.	*Deficiency of By-laws.*
Burley-in-Wharfedale ...	... No certification of new dwellings.
Bishopthorpe R.	... Deficient.
Calverley	... Out of date generally.
Darfield	... Inadequate in many cases.
Dodworth ...	... Wanted.
Gomersal	... Obsolete.
Haworth	... Inefficient.
Hoylandswaine ...	... Obsolete.
Penistone R. ...	... No by-laws in district.
Pudsey	... Deficient.
Queensbury ...	... Deficient.
Rotherham R. ...	... Require revision.
Shelf	... Require revision.
Worsborough ...	... Require revision.
Sedbergh R. ...	... Wanted for new streets and buildings and slaughter houses.
Wortley	... As to slaughter houses.

Dr. Sadler reports that the Barnsley building by-laws "admit of "improvement in at least two important particulars ; one being the want of "some provision for impervious damp courses in the erection of dwellings, "(specially needed here, where the building stone is so porous that many "houses are excessively damp), and another being the want of regulations for "the paving of back yards, the need for which, obviously enough, has been "made still more manifest by recent observations, showing that the germs of "typhoid fever grow and multiply readily in soil watered from time to time "with solutions of organic matter, as the back yards of our cottage houses "always are."

The medical officer of health for Featherstone recommends "the "putting in force of By-law No. 10, 'New Buildings,' that the foundations "and sites should be asphalted or concreted. In the damp clay soil which "we have here, it should not be left a dead letter, which it has been."

At Burley "there is one point about new buildings which has been "brought forward during the year, *i.e.*, the want of some inspection and

"certificate of fitness for occupation." Mr. Hebblethwaite says "I should "like a by-law to be added to your statutes requiring a certificate from the "medical officer of health before any house or other building is occupied."

Dairies, Cowsheds, and Milkshops.—These premises have recently come in for a good share of attention throughout the country, and I think that the West Riding has not been slow in recognising the necessity for securing the best sanitary environments for our dairy cattle. The remarks on this subject in the annual reports under review seem to indicate an improving state of affairs and a growing sense of the responsibility which attaches to every sanitary authority in this matter. Special mention is made of the official inspection during 1898 of no less than 3523 cowsheds by the medical officers and sanitary inspectors of the Riding,—an enormous work which cannot but yield good results. Many of the sanitary authorities in the Riding have framed and adopted regulations under Article 13 of the Dairies, Cowsheds and Milkshops Order, and it is to be hoped that those authorities who are still without such regulations will immediately avail themselves of the useful set of "models" recently framed by the Local Government Board.

Whilst on this important subject I may be permitted to try and clear up the confusion which I find exists in many minds as to the scope of these orders and regulations. The provisions of the Dairies, Cowsheds and Milkshops Order apply, without adoption, to every sanitary authority in Great Britain with the force of the general law, and yet one not infrequently hears of sanitary authorities deciding to "adopt" the Order. Some of its provisions are most important, and those authorities who fail to enforce them are neglecting a statutory duty. Article 6 requires *every* sanitary authority to keep a register of all cowkeepers, dairymen, and purveyors of milk in the district, and to give public notice of such registration being required. For fourteen years, therefore, it has been unlawful for any person in Great Britain to trade as above without being so registered. Articles 7 and 8 make it unlawful to use as a cowshed or dairy any building which does not satisfy the sanitary authority with regard to light, air, water, drainage, &c. Article 9 precludes any person suffering, or having had contact with infectious disease, from assisting in the milk trade. Article 13 empowers any sanitary authority to make additional regulations with regard to these premises within their district, for securing proper inspection, ventilation, water, drainage, cleanliness, and protection from infection or contamination. The Local Government Board have recently (1899) issued a model set of these additional regulations. Article 15 provides that the milk of a cow suffering from cattle plague, pleuro-pneumonia, or foot and mouth disease, shall not be mixed with other milk or used for human food. *The new Dairies, Cowsheds and Milkshops Order, 1899 amends Article 15 so as to include tuberculosis of the udder; so that it is now a criminal offence for any person in any district to sell milk from a cow certified to be suffering from tubercular disease of the udder, or even to mix it with other milk.*

Here a grave responsibility is placed upon sanitary authorities, necessitating more rigorous inspection of cowsheds than has been hitherto undertaken in many districts. It would add materially to the value of these inspections if a permanent record were kept in a properly-arranged register.

Slaughter Houses.—Urban Sanitary Authorities are well supplied with legal powers for the full supervision and control of these premises. Apart from the powers of Urban Councils to actually erect and manage slaughter-houses they are entrusted by law with important duties, which I am afraid are not always carried out.

In Urban Districts :—

(1) Every slaughter-house is required to be registered in a book kept by the Sanitary Authority.

(2) No new slaughter-house to be started since 1875 without a licence from the Sanitary Authority

(3) All such premises to be conspicuously labelled.

(4) The Urban Council *must* make by-laws as to inspection, cleanliness, water supply, &c.

There is evidence in the Annual Reports for 1898 that the increasing importance now attaching to the meat supply is having a good effect upon the condition of our slaughter-houses. Specific mention is made of the inspection by West Riding sanitary officers of 1126 such premises during the year, and their condition is recorded as "satisfactory" or "fair" in the majority of cases.

In some districts, however, inspection showed room for improvement.

Altofts	...	Not satisfactory
Holmfirth	...	Not good
Horsforth	...	Only fairly satisfactory
Keighley	...	Two bad
Normanton	...	Unsatisfactory
Rawdon	...	One poor
Sedbergh R.	...	Unsatisfactory
Selby	...	Mostly deficient
Skipton	...	Indifferent
Thurlston	...	By-laws not strictly observed
Wath	...	Not very satisfactory
Wetherby R.	...	Troublesome with offal

The Medical Officer of Health for Pontefract urges the erection of public abattoirs, as follows :—"In connection with the prevention of tuber-"cular disease, sanitarians are all agreed on the necessity for the provision "of public slaughter-houses, where the carcases, together with the internal "organs of animals to be offered for sale, can be thoroughly examined by an "expert. The erection of such buildings would remove nuisances from the "neighbourhood of dwelling houses, would protect meat from the liability to "exposure to foul emanations, owing to the better sanitary conditions "under which properly constructed buildings would be placed, and further, "it would ensure the thorough examination of all meat for disease, and "would materially tend to diminish the traffic in diseased meat."

Dr. Mitchell Wilson is of the same opinion. In his Selby Report he writes—"There are eight registered slaughter-houses in Selby, and from "repeated visits to them all, I can only say that the greater number come far "short of what a reasonably satisfactory slaughter-house should be. Many "are found in small narrow yards with dwelling houses all round, and in a "few the entrance is through a shop or narrow passage. It is very difficult "to carry on the work of preparing human food and the removal of offal,

"refuse, &c., under such conditions without causing a nuisance. The whole "conditions are changed when a public slaughter-house is provided, and the "experience I have had of these in Doncaster and in Goole justifies me in "urging that the time has come when a similar public convenience should be "provided in Selby."

At Sowerby Bridge "there is one public abattoir owned by the Council. "This is of great service to the butchers in the town, and affords greater "facility to the Inspector for the detection of unsound meat."

Common Lodging Houses.—Mention is made in the reports of 113 registered Common Lodging-houses, which have all been inspected and reported upon as being generally satisfactory. At Pudsey, however, their condition is described as bad, while there is room for improvement at Normanton, Pontefract, Ripon and Tickhill. The medical officer of health for Holmfirth states that their by-laws as to common lodging houses are "for the "most part disregarded and probably unknown." He adds, "these houses "are perhaps one of the greatest dangers to the district, in the matter of "introducing infectious diseases."

No legal proceedings under this head were reported from any district in 1898.

Canal Boats.—Sanitary Authorities whose districts include navigable waters have important duties to perform in securing the sanitary condition of canal boats and preventing the spread of infection by these vessels. No less than 2032 inspections were made in 34 districts in the Riding during the year. The condition of the boats is recorded as satisfactory, with few exceptions. Notices had to be served at Goole and at Doncaster, where two prosecutions were also instituted by the sanitary authority. Mr. Twigg of Mexborough writes as follows on this subject:—"One instance in particular stands out "prominently from the rest as showing how a township may be suddenly "plunged into an epidemic without knowing the why and the wherefore. A "boat came to Mexborough with a case of scarlatina on board. It was placed "in quarantine and the captain told to stay until it had been disinfected. One "morning he left early and, it appears, went to Thorne where the boat was "discovered with two other cases on board. . . . The only question that then "arose was who should prosecute? We did not."

Bakehouses.—Forty-five of the reports make reference to a total of 209 bakehouses, 24 state that there are none in their districts, and the remainder give no information. Inspection of these premises during 1898 afforded fairly satisfactory results. At Wombwell, however, one bakehouse was stopped, legal proceedings being threatened by the District Council.

The number of bakehouses in the Riding must be greatly in excess of those referred to in the reports, and I am afraid it is not fully realized by all health officers that the sanitary control of retail bakehouses is still entirely in the hands of Local Authorities.

Offensive Trades.—Only 33 reports deal with this subject, and these make reference to the existence of 77 offensive trades, of which 63 are said to have been inspected. There are, of course, considerably more than this number of premises in the Riding where processes are carried on which

are included in the legal category of "offensive trades"; but the majority of the reports have not referred to these presumably because they did not actually cause offence during the year.

At Hipperholme, the tanneries are said to call for more attention; while at Meltham the soap works and bone-boiling works are not satisfactory, though, at the date of the report, the owners were trying to improve matters.

Smoke Abatement, or rather the need of it, is a matter of great importance in many districts in the Riding. It is doubtless a difficult matter to deal with, but much might be achieved if Sanitary Authorities would cause more frequent observations to be taken, followed up by warnings, and by prosecutions in the worst cases. The subject is referred to in 34 of the annual reports under review. Record is made of 2,581 observations taken by the sanitary inspectors, and in a few instances prosecutions ensued. At Ossett, "no action has been taken to lessen the nuisance arising from the "discharge of black smoke into the atmosphere." At Mexborough "many "complaints were made from time to time about the smoke nuisance from the "various works, but no prosecutions were made," and the medical officer adds "a great improvement has since taken place."

Burial Grounds.—No less than 520 burial grounds are referred to in the reports, but this does not include all in the Riding. In many districts there is urgent need for further burial accommodation, and extensions are said to be in progress at Greasborough, Normanton, North Bierley, and Todmorden. There are two burial grounds at Wilsden (now part of the Bingley District) which "it is very desirable should be closed on account of "their nearness to the main street and neighbouring dwelling houses."

Seizures of Unsound Food were made during 1898 at the following places:—Barnsley (27 rabbits, 3 carcases), Batley (1), Bingley (1), Brighouse (2), Dewsbury (210 rabbits), Harrogate (2), Holmfirth (1), Hoyland Nether (1), Keighley, Knottingley (1), Normanton (1), Stocksbridge (1), Wortley II. (9 barrels of jam). Prosecutions in connection with the exposure of unsound food for sale took place at Batley (fined £20), Bingley, Hoyland Nether (£10), and Keighley.

Sale of Food and Drugs Acts.—Samples were purchased by the Local Sanitary Inspectors of the following 30 districts during 1898. The majority of these samples were "new milk," purchased under arrangement, by which the County Council pays the public analyst's fee:—

Barnsley - - 14	Honley - - - 12	Rothwell - - 1
Castleford - - 8	Ilkley - - - 13	Roystone - - 6
Clayton West - - 6	Keighley - - 5	Shelf - - - 1
Dewsbury - - 30	Linthwaite - - 12	Skipton - - - 3
Doncaster - - 13	Meltham - - 5	South Crosland - 5
Golcar - - - 8	North Bierley - 7	Southowram - - 2
Goole - - - 2	Penistone - - 2	Sowerby Bridge - 5
Greetland - - 5	Pudsey - - - 2	Todmorden - - 15
Harrogate - - 12	Rawmarsh - - 4	Wakefield City - 38
Hemsworth R. - 2	Rotherham B. - 35	Wakefield R. - - 66

For information as to the number of samples purchased by the County Council's Inspectors during the year, see page 8.

Meteorology.—The following are the records of rainfall during 1898 as given in 36 reports which touch on this subject :—

	Inches.		Inches
Barkisland	41·31	Silsden	27·72
Barnsley B....	21·81	Skipton	31·12
Batley B.	21·44	Southowram	28·74
Harrogate	about 32·00	Soyland	41·31
Hebden Bridge	42·68	Uppermill	39·07
Holme	61·9	Wath	20·98
Holmfirth	47·3 to 61·9	Wilsden	about 42·0
Ilkley	32·87	Worsborough	21·81
Keighley B.	33·6	Barnsley R.	21·81
Meltham	50·02	Kiveton Park R. ...	about 30·00
New Mill	52·0	Penistone R.	24·28
Ossett B.	22·74	Rotherham R.	25·0
Oxenhope	52·41	Saddleworth R.	39·07
Penistone	29·25	Sedbergh R.	56·03
Pudsey	23·82	Settle R.	39·70
Ripon City	25·34	Todmorden R.	42·68
Rishworth	40·34	Wharfedale N.	30·5
Rotherham B.	20·00	Wortley I.	23·48

For further particulars as to rainfall see Appendix, page 65.

The mean temperature of 1898 was also observed in 11 districts and recorded as follows :—

Hebden Bridge	47·68
Ilkley	48·20
Keighley B.	48·04
Meltham	48·50
Ossett B.	49·44
Pudsey	48·70
Rotherham B.	58·00
Shelf	56·00
Skipton	48·98
Settle R.	47·70
Todmorden R.	47·68

Commenting on the climatic conditions, Dr. Sadler writes in the Barnsley Rural report as follows :—"The year 1898 was milder and drier than the "average, less cold in the winter months, both at the beginning and end of "the year ; a little warmer than usual in the summer months, and with rather "more than 5 inches, or 500 tons per acre, less rain than the average for the "preceding 30 years, the deficiency having been most marked in the first "quarter of the year, in July, and in September. The dry and warm weather "of the last two months caused the temperature to remain for about 12 days "longer than usual at or above a temperature of 56°, with the result of an "unusual amount of diarrhœa during that period, and an increased tendency "to the development of typhoid fever a little later."

At Ilkley "the mean daily average range of temperature was only about "12·5 degrees, and the number of days on which frost occurred was only 45."

Mr. F. J. Burman, of Wath, gives the following data—"The coldest "night was on February 21st (9 degrees of frost). The hottest day, "September 8th; the wettest day July 22nd, 1·02 inches, the only day on "which more than one inch of rain fell. Driest month September; wettest "month October. Snow fell on 12 days, but never lay long on the ground. "The sunshine was 1480 hours, and was entirely absent on 89 days. We "had 11 thunderstorms, 16 fogs, and 5 gales."

In the Appendix will be found statistical tables as to loans borrowed for sanitary purposes, by-laws made, rainfall, efficiency of vaccination, etc. I have also included, to serve as a record, a fac-simile of a blank form of "Table C," which the West Riding Sanitary Committee have for some years past requested local medical officers to fill up and attach to their reports; and I ought here to express my thanks to the 153 medical officers who so kindly filled up this form for 1898.

Folded in at the end are the usual comprehensive Tables I. II. and III., giving the vital statistics and other data as to each district in the Riding.

JAMES ROBT. KAYE,

County Medical Officer.

County Hall, Wakefield,
August 31st, 1899.

APPENDIX.

Money borrowed by Local Sanitary Authorities.—

The total amount of the loans for various purposes sanctioned in recent years by the Local Government Board, on the application of local authorities within the Administrative County is shown in the next table.

Loans sanctioned 1881-97.

YEAR.	PURPOSE.			
	Sewerage and Sewage Disposal.	Water.	Hospital.	Other.
1881	76,923	43,045	—	48,499
1882	41,148	42,767	1,200	13,993
1883	22,245	7,518	—	14,461
1884	31,460	5,528	—	46,074
1885	28,460	16,510	—	20,112
1886	11,520	17,335	—	50,380
1887	31,652	15,452	—	39,872
1888	14,110	9,130	5,500	90,434
1889	25,933	53,479	—	71,968
1890	9,969	57,030	8,500	24,505
1891	64,035	63,205	8,300	88,518
1892	77,323	16,180	2,005	118,856
1893	101,143	27,250	9,150	140,639
1894	202,839	56,328	30,386	117,306
1895	289,370	81,176	11,635	255,110
1896	168,706	12,501	250	107,965
1897	147,400	18,432	12,420	149,122

The following Table shows the authorities that have received sanction for such loans :—

Loans sanctioned during 1897.

I.—Urban Districts.	Purpose.	Years	Amount.
			£
Ardsley ...	Sewerage and disposal	30	682
Baildon ...	Steam road roller and shed	10	400
,, ...	Street improvement	10	292
Batley ...	Land for deposit of debris	50	1550
,, ...	Street improvement	37	2044
Clayton ...	Sewerage and disposal	33	11030
Darfield ...	Offices and depôt	20	1624
,, ...	Purchase of Land	2	456
,, ...	Recreation ground	30	395
,, ...	Street improvement	30	150
,, ...	Allotments Acts, 1887 and 1890	30	375

I.—Urban Districts.	Purpose.	Years	Amount.
			£
Denholme ...	Land for sewage disposal	50	1400
,, ...	Sewerage and disposal	30	2700
Dewsbury ...	Public walks & pleasure grounds	20	9711
,, ...	Steam road roller	10	260
,, ...	Street improvement	10	116
,, ...	,,	20	2376
,, ...	,,	20	2506
Doncaster ...	Sewerage and disposal	30	7500
Farsley ...	,,	34	15700
Harrogate ...	Baths, &c.	10	7000
,, ...	,,	50	16000
,, ...	Purposes of Art. I. of P.O. of 1897	35	3150
,, ...	Sewage disposal	15	1300
,, ...	,,	30	2200
Hebden Bridge ...	Fire Station and Offices	30	1800
,, ...	Sewerage and disposal	34	17000
,, ...	Water supply	30	1097
Heckmondwike ...	Sewerage and disposal	33	8618
,, ..	Street improvement and new road	29	5915
Hipperholme ...	Public offices and depôt	32	3000
Ilkley ...	Gas stoves	10	300
,, ...	Gas supply	30	920
,, ...	Land for sewage disposal	50	1275
,, ...	Sewerage and disposal	15	125
,, ...	,,	30	6000
,, ...	,,	30	2368
Keighley ...	Gas Works	20	10640
,, ...	Street improvement	33	39117
Knaresborough ...	Sewerage and disposal	30	1725
Morley ...	Stables, cart sheds, &c.	30	1000
Mytholmroyd ...	Offices and Store Yard	30	750
,, ...	Water supply	30	100
North Bierley ...	Private street improvement	2	450
Oakworth ...	Shed for steam roller	25	250
,, ...	Street improvement	25	650
Penistone ...	Land for sewage disposal	50	350
,, ...	Sewerage and disposal	30	6250
,, ...	Water supply	30	1200
Pudsey ...	Repayment of loan	30	7000
Ravensthorpe ..	Street improvement	32	1000
Rawmarsh ...	Sewerage and disposal	30	4500
Rothwell ..	Sewage disposal	15	275
,, ...	Sewerage and disposal	30	4725
Selby ...	Gasworks	30	600
,, ...	Street improvement	16	425
Shipley ...	P.H. Interments Act, 1879	30	1100

I.—Urban Districts.	Purpose.	Years	Amount.
			£
Soothill Nether ...	Sewerage and disposal	30	825
,, ...	,,	30	365
Sowerby Bridge ...	Gas supply	30	1950
,, ...	,,	5	250
Stocksbridge ...	Sewage disposal	15	400
,, ...	Sewerage and disposal	30	1750
Swinton ...	,,	30	2225
Thurlstone ...	Water supply	25	250
Tong ...	Sewerage and disposal	30	5900
Wombwell ...	Private street improvement	1	900
,, ...	,,	5	3100
,, ...	Sewerage	30	6088
,, ...	Sewerage and disposal	30	6642
Yeadon ...	Land for street improvement	3	698
,, ...	Street improvement	39	502
Harrogate ...	Electric Lighting Act, 1882	25	15750

II.—Rural Districts *and Contributory Places.*	Purpose.	Years	Amount.
			£
Bowland (*Gisburn*) ...	Sewerage	30	130
Doncaster (*Thurnscoe*) ...	Sewerage and disposal	30	300
Halifax Rural District ...	Highway Amendment	3	1800
Hemsworth (*Brierley*) ...	Water supply	30	1306
,, ...	Sewerage and disposal	30	190
,, ...	Water supply	30	5284
,, (*Shafton*) ...	,,	30	915
,, (*South Emsall*)	,,	30	1488
,, (*South Hiendley*)	,,	30	2045
,, (*South Kirkby*)	,,	30	4462
Keighley (*Morton E. & W.*)	Land for sewage disposal	50	1300
,, ,,	Sewerage and disposal	30	6700
,, Rural District ...	Steam Roller, Scarifier and Shed	15	500
Knaresborough (*Bilton*) ...	Sewerage and disposal	30	3550
Pontefract (*Carleton*) ...	Sewerage and disposal	30	3064
Saddleworth	,, ,,	30	3725
Sedbergh (*Dent*) ...	Land for sewage disposal	50	470
,, ,, ...	Sewerage and disposal	30	975
Settle (*Clapham-with-Newby*)	,, ,,	21	280
,, ,, ...	,, ,,	33	1800
,, ,, ...	Water supply	30	285
,, (*Long Preston*) ...	Sewerage and disposal	30	3300
Skipton (*Thornton*) ...	Sewerage	30	600
,, (*Salterforth*) ...	P. H. Interments Act, 1879	20	350
Wakefield (*Alverthorpe*) ...	Sewerage and disposal	30	282
,, (*Outwood*) ...	,, ,,	30	786

III.—Joint Hospital Districts.	Purpose.	Years	Amount.
			£
Keighley and Bingley Joint Hospital Board	Hospital	25	6000
Pontefract Joint Hospital Board	Land and hospital	30	6420

Provisional Orders granted and confirmed during 1897, under the Public Health Act, 1875.

District.	Object.
Harrogate Borough	Compulsory purchase
Ditto	Altering a Local Act and a Confirming Act
Honley and South Crosland Urban Districts	Forming a United Sewerage District under Section 279
Luddendenfoot Urban District ...	Compulsory purchase
Luddendenfoot, Midgley, and Warley Urban Districts	Forming a United Sewerage District under Section 279
Settle Rural (Burton-in-Lonsdale) ...	Compulsory purchase
Wath, Swinton, Greasborough, and North Rotherham Joint Hospital District	Altering a Confirming Act

Local Acts of Parliament.—The following West Riding Acts were obtained during the year 1897 :— Bradford Tramways and Improvement Act, Halifax Corporation Tramways Act, Harrogate Corporation (Waterworks Transfer) Act, Harrogate Waterworks Act, Huddersfield Corporation Act, Leeds Corporation Act, and Sheffield Corporation (Streets and Tramways Act.

Bye-laws confirmed during 1897.

Subject.	Sanitary Districts.
Scavenging and Cleansing ...	Ardsley Urban, Otley Urban, Yeadon Urban
Nuisances	Ardsley Urban, Balby-with-Hexthorpe Urban, Halifax Rural, Otley Urban and Yeadon Urban
Common Lodging Houses ...	Ardsley Urban, Doncaster Rural, Otley Urban, Yeadon Urban
Streets and Buildings ...	Balby-with-Hexthorpe Urban, Doncaster Rural, Halifax Rural, Mexborough Urban, Normanton Urban, Otley Urban, Pudsey Urban, Todmorden Borough, Yeadon Urban
Slaughter Houses ...	Ardsley Urban, Doncaster Rural, Otley Urban, Yeadon Urban
Offensive Trades ...	Otley Urban, Yeadon Urban
Hackney Carriages ...	Hebden Bridge Urban
Cemeteries	Yeadon Urban
Mortuaries	Otley Urban
Sanitary Conveniences ...	Ardsley Urban and Otley Urban
Whirligigs, etc. ...	Ardsley Urban and Otley Urban

Dairies, Cowsheds, and Milkshops Order, 1885.—During 1897, Regulations were framed by the following West Riding Urban Sanitary Authorities under Article 13 of the above Order :—

Ardsley East and West.
Balby-with-Hexthorpe.
Darfield.
Monk Bretton (2 series).
Netherthong.
Otley.
Thurlstone.

Urban Powers conferred on Rural District Councils during 1897.

Rural Sanitary Authority.	Section of Public Health Act.	Contributory Places affected.
Halifax R. ...	1875 Act—Section 161 ...	The whole district
Knaresborough R.	1875 Act—Sections 25, 26, 42, 44, 47, 66, 112, 113, 114, 115, 157, 160, 169 (2) (3), 170; also Section 3 of the Public Health (Buildings in Streets) Act, 1888; also Section 23 of the P.H.A. Amendment Act, 1890	Bilton and Starbeck
Ditto ...	1875 Act—Sections 25, 26, 47, 112, 113, 114, 115, 160; also Section 23 of the P.H.A.A., 1890	Killinghall, Knaresboro' Outer, and Scriven
Ditto ...	1875 Act—Sections 25, 26, 47, 66, 112, 113, 114, 115, 160; also Section 23 of the P.H.A.A., 1890	Pannal
Ditto ...	1875 Act—Section 157; also Section 23 of the P.H.A.A., 1890	Follifoot
Ripon R. ...	1875 Act—Section 154 (so far as to making new road)	Markington
Rotherham R.	1875 Act—Section 42 (as to watering streets); also Sections 157, 158 and 171 (4)	The whole district
Settle R. ...	1875 Act—Sections 169 (2) (3) and 170	Hellifield
Skipton R. ...	1875 Act—Section 171 (4) as to omnibuses, &c.	Addingham, Bolton Abbey, Embsay-with-Eastby, Grassington
Ditto ...	,, Section 150 (except as to sewering); also Section 41 of P.H.A.A. 1890	Thornton
Wharfedale R.	1875 Act—Sections 157, 158, also Sections 23 (1, 2, 4), 25 and 33 of P.H.A.A., 1890	Adel-cum-Eccup, Arthington, Bramhope, Esholt, Menston, Middleton, Newhall-with-Clifton and Poole

Vaccination during the Ten Years 1886-95. —

Percentage of children (born in years stated) not accounted for up to January 31st in the second following year, as "successfully vaccinated," "insusceptible of vaccination," "had small pox," or "died unvaccinated."

	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895
	—	—	—	—	—	—	—	—	—	—
England and Wales ...	6·4	7·1	6·0	9·9	11·3	13·4	14·9	11·7	19·2	20·5
London ...	7·8	9·0	7·4	11·6	13·9	16·4	18·4	14·1	20·6	24·9
West Riding ...	8·8	9·6	8·6	15·0	16·6	17·5	17·3	18·2	20·8	20·5
Unions :—										
Barnsley ...	6·2	5·1	6·0	12·0	11·2	8·5	5·7	5·2	6·1	8·2
Bradford ...	8·0	10·5	7·3	20·6	24·3	31·0	22·7	20·8	27·8	26·9
Bramley ...	3·7	4·6	4·4	7·5	8·5	10·0	8·1	13·3	21·2	12·9
Dewsbury ...	37·5	29·6	34·2	37·3	39·1	32·5	37·7	41·3	47·6	49·5
Doncaster ...	4·5	4·1	3·6	6·6	7·2	8·6	10·6	11·5	13·9	13·2
Ecclesall Bierlow ...	4·0	1·9	4·0	4·0	5·1	5·6	5·5	4·8	4·7	4·3
Goole ...	3·1	2·1	3·1	5·2	4·4	4·8	7·3	6·9	12·0	11·9
Great Ouseburn ...	2·5	3·8	2·7	2·7	4·0	5·3	3·7	2·0	3·1	2·5
Halifax ...	13·0	28·2	14·0	60·0	69·6	74·9	74·3	78·5	86·2	82·3
Hemsworth ...	4·1	4·1	4·1	6·7	5·8	5·5	6·4	7·8	6·9	8·2
Holbeck ...	3·3	3·1	2·4	4·4	4·8	4·5	6·0	4·3	4·4	5·8
Huddersfield ...	1·3	1·2	1·3	2·2	1·6	2·5	2·3	2·9	2·2	2·8
Hunslet ...	3·1	3·2	4·3	3·9	4·0	3·3	3·8	3·7	5·0	5·8
Keighley ...	71·8	75·4	71·9	81·1	80·1	83·1	83·2	82·6	85·8	86·4
Knaresborough ...	6·0	6·2	5·8	11·3	12·7	16·9	19·1	15·2	21·5	34·2
Leeds ...	2·1	4·2	2·2	5·7	5·1	5·5	5·5	5·8	7·2	6·9
North Bierley ...	4·9	5·8	5·6	11·7	15·8	22·0	25·9	26·5	27·8	25·0
Pateley Bridge ...	0·8	0·5	0·6	1·7	2·1	1·4	2·0	0·5	2·9	6·0
Penistone ...	2·1	3·5	3·1	3·1	2·3	3·9	3·2	2·2	12·6	7·0
Pontefract ...	5·0	4·3	4·8	5·2	5·0	3·8	4·8	5·8	8·8	7·6
Ripon ...	11·4	14·1	8·5	10·3	14·5	10·4	9·7	15·8	14·0	18·1
Rotherham ...	3·9	2·8	4·6	5·4	4·1	5·4	5·4	6·6	6·2	8·0
Saddleworth ...	4·0	3·2	3·4	14·2	38·8	69·0	72·0	74·4	72·2	77·3
Sedbergh ...	2·7	0·0	1·9	3·6	0·0	0·0	1·9	1·0	2·8	6·0
Selby ...	2·1	3·0	2·1	2·4	1·4	5·5	3·7	4·7	5·7	4·6
Settle ...	3·4	1·9	2·6	3·2	5·9	4·2	6·8	10·9	11·0	16·4
Sheffield ...	3·4	2·8	4·1	5·1	5·8	6·9	6·6	7·6	9·5	10·3
Skipton ...	8·8	10·6	7·3	13·8	22·7	25·8	38·4	46·2	60·0	63·1
Tadcaster ...	4·1	4·2	3·8	4·4	4·6	4·3	4·2	6·0	4·0	4·5
Thorne ...	6·7	7·4	7·0	8·8	9·3	12·5	15·8	10·9	19·2	16·4
Wakefield ...	3·9	3·0	3·4	5·1	4·6	5·3	5·5	6·0	7·3	7·1
Wetherby ...	7·4	5·9	8·6	7·1	6·2	8·7	10·4	10·4	12·5	8·3
Wharfedale ...	6·0	7·0	6·4	16·3	14·0	13·5	11·1	14·1	16·8	20·1
Wortley ...	3·6	2·4	3·9	5·5	7·0	5·9	6·9	9·0	10·0	10·3

Thus, in 1895 there were, in the West Riding Registration County, 78,138 births, of which 16,015, or 20·5 per cent., were "not accounted for" up to

31st January, 1897, and probably went to add to the unvaccinated population; while 51,841 or 66·3 per cent., were successfully vaccinated. These are percentages of *births* only. The increments to the whole population represented by the same figures are 0·6 per cent. of unvaccinated and 2·0 per cent. vaccinated. The remaining 10,282 forming 13·2 per cent. of the total births, comprise 394 "insusceptible of vaccination," and 9,888 "died unvaccinated."

The latest available official returns, with regard to vaccination, relate to the children born in 1895. The table shows the percentage "unaccounted for" in each Union of the West Riding for each of the ten years 1886-95. Vaccination is not under the control of the sanitary authorities, and the data cannot be given for smaller divisions than Unions.

West Riding Rainfall, 1898.

The following data as to the rainfall in the West Riding during 1898 are taken from "British Rainfall," published by Mr. G. J. Symons, *F.R.S.*, to whom I am indebted for permission to quote the figures. They are here arranged according to Sanitary Districts, grouped in Unions. Where more than two records are available for one district, only the highest and lowest readings are inserted.

Union and Sanitary District.	Height (in feet) above Sea level.	1898.	
		Rainfall in inches.	Wet days (0·01 inch rainfall).
Barnsley Union—			
Barnsley Borough (3) ...	317 to 355	18·0 to 22·4	109 to 167
Hoyland Nether ...	181	18·8	106
,, ...	330	22·2	129
Worsborough ...	225	20·1	131
Barnsley R., *Stainborough*...	520	22·4	137
Bishopthorpe Union ...	No information		
Bramley Union ...	No information		
Clitheroe Union—			
Bowland R. (9) ...	450 to 1559	49·7 to 76·4	165 to 206
Dewsbury Union—			
Mirfield ...	200	25·3	159
Batley Borough ...	492	20·5	
,, ...	301	21·4	143
Ossett Borough ...	300	22·7	124
Doncaster Union—			
Doncaster Borough (3) ...	30 to 46	17·9 to 21·1	131 to 145
Tickhill ...	61	21·8	156
Doncaster R. (3) ...	17 to 190	19·8 to 23·9	157 to 165
Goole Union—			
Goole ...	18	19·6	137
Goole R. ...	?	23·5	126
Great Ouseburn Union—			
Great Ouseburn R., *Nun Monkton* ...	45	22·9	150

Union and Sanitary District.	Height (in feet) above Sea level.	1898.	
		Rainfall in inches.	Wet days (0·01 inch rainfall).
Halifax Union—			
Brighouse Borough ...	380	25·2	131
Midgley ...	1060	40·4	
,, ...	1350	47·7	
Southowram ...	750	28·7	186
Sowerby (3) ...	345 to 450	39·8 to 41·7	199 to 204
Queensbury ...	1050	35·5	139
Warley ...	1425	42·8	
Halifax R. ...	800	34·6	
Hemsworth Union—			
Hemsworth R. ...	250	20·4	164
,, ...	?	21·4	153
Holbeck Union ...	No information		
Huddersfield Union—			
Golcar ...	400	40·7	195
Holme ...	861	58·9	177
Holmfirth ...	830	47·3	
,, ...	820	61·9	
Honley ...	350	36·6	
Linthwaite ...	800	42·5	216
Marsden (7) ...	900 to 1360	29·6 to 43·8	
Meltham (5) ...	514 to 1212	41·1 to 50·0	208
New Mill ...	930	52·1	
Slaithwaite ...	1149	42·1	
,, ...	1149	44·8	
Hunslet Union ...	No information		
Keighley Union—			
Bingley (3) ...	572 to 701	21·8 to 40.6	174 to 209
Haworth ...	850	41·8	
Oakworth ...	1008	39·9	
Oxenhope (4) ...	875 to 1401	43·3 to 52·4	254
Keighley Borough ...	385	33·5	190
Knaresboro' Union—			
Harrogate Borough (3) ...	380 to 455	24·8 to 32·2	151 to 181
Knaresboro' ...	200	24·3	119
Knaresboro' R. (7) ...	170 to 630	22·5 to 30·0	158 to 198
Leeds Union—			
Leeds R. ...	400	24·5	170

Union and Sanitary District.	Height (in feet) above Sea level	1898.	
		Rainfall in inches.	Wet days (0·01 inch rainfall).
North Bierley Union—			
Clayton ...	982	36·0	202
Denholme (4) ...	810 to 1075	39·8 to 49·8	227 to 236
Pudsey ...	521	23·8	170
Shipley ...	304	26·8	
,, ...	500	24·6	160
Pateley Bridge Union—			
Pateley Bridge R. (14) ...	410 to 1710	31·9 to 54·4	156 to 208
Penistone Union—			
Penistone R. (7) ...	340 to 1358	24·9 to 49·0	145 to 205
Gunthwaite and Ingbirchworth ...	853	33·6	208
Thurlstone (7) ...	717 to 1244	31·1 to 50·6	176 to 207
Pontefract Union—			
Methley ...	98	19·9	128
Ripon Union—			
Ripon City ...	120	25·3	193
Ripon City ...	572	35·9	133
Ripon R. (5) ...	225 to 859	24·9 to 35·3	139 to 175
Rotherham Union—			
Rotherham R. (6) ...	117 to 360	20·6 to 24·4	119 to 165
Wath-upon-Dearne ...	185	21·0	148
Saddleworth Union—			
Saddleworth R. (8) ...	630 to 1414	32·0 to 49·1	187 to 194
Sedbergh Union—			
Sedbergh R. (4) ...	300 to 400	56·0 to 59·5	199 to 215
Selby Union ...	No information		
Settle Union—			
Settle R. (6) ...	525 to 1296	39·4 to 68·8	204 to 231
Sheffield Union ...	No information		
Skipton Union—			
Silsden (3) ...	370 to 760	26·3 to 30·0	163 to 176
Skipton ...	360	31·0	175
,, ...	380	32·1	
Skipton R. (20) ...	350 to 1661	24·7 to 78·9	182 to 235
Tadcaster Union—			
Tadcaster R. ...	70	21·7	167
Thorne Union ...	No information		
Todmorden Union—			
Todmorden R. ...	1058	47·7	
,, ...	1380	43·2	
Todmorden Borough ...	650	41·2	206
,, ...	1020	46·8	211
Hebden Bridge ...	479	42·7	200
Mytholmroyd ...	500	36·9	200

Union and Sanitary District.	Height (in feet) above Sea level.	1898.	
		Rainfall in inches.	Wet days (0·01 inch rainfall).
Wakefield Union—			
Wakefield City ...	96	21·5	129
Wakefield R. (3) ...	140 to 235	17·7 to 19·8	127 to 148
Wetherby Union—			
Wetherby R. ...	340	25·6	175
,, ...	130	27·9	132
Wharfedale Union—			
Horsforth ...	250	27·0	185
Ilkley ...	312 to 600	29·3 to 32·9	128 to 210
Wharfedale R. (18) ...	139 to 1275	24·6 to 41·4	168 to 208
Worksop Union ...	No information		
Wortley Union—			
Wortley R. ...	548	24·3	149
Stocksbridge ...	950	30·1	198

FACSIMILE OF BLANK FORM

Supplied to Medical Officers of Health by the West Riding Sanitary Committee for attachment to Annual Reports.

Table C. 1898. .....*Sanitary District*

Medical Officer of Health.....

Sanitary Inspector .....

WATER SUPPLY—

Quality Action on Lead

Any extensions or change during 1898?

Any inadequacy in any part?

SEWERAGE AND SEWAGE DISPOSAL—

Extensions or Improvements during 1898

Any inadequacy in any part?

SCAVENGING—

Are the privy-middens, etc., cleansed by Sanitary staff, by Contractors, or by Owners and Tenants?

If scavenging undertaken by District Council, what was the annual cost during 1898?

ADOPTIVE ACTS— Parts Adopted and Date

Public Health Acts (Amendment) Act, 1890

Infectious Disease (Prevention) Act, 1890

What was the amount paid to practitioners under the Infectious Disease (Notification) Act during 1898?

BY-LAWS—Any adopted or sanctioned during 1898?

Are they properly enforced?

Any deficiency?

REGULATED BUILDINGS, TRADES, &c.	Number		General Conditions?	Lega Proceedings (if any).
	Registered.	Inspected.		
Common Lodging Houses				
Canal Boats				
Slaughter Houses ...				
Bakehouses...				
Dairies				
Cowsheds				
Milkshops				
Offensive Trades ... ... (Please specify nature)				

ISOLATION HOSPITAL—

Disinfecting Apparatus Type of same

Compensation paid for infected articles destroyed during 1898

DWELLINGS—Number of Houses built during 1898

General character
Any Houses unfit for habitation?
Any overcrowding of persons in Houses?
Any overcrowding of Houses *on area*?
Any action taken under the Housing of the Working Classes Act, 1890?

METEOROLOGY—Mean Temperature for year 1898 Rainfall

GEOLOGY—Nature of Soil Subsoil

MISCELLANEOUS—

Is House-to-House Inspection systematically made?
Total No. of Nuisances in hand at close of 1897 At close of 1898
Reported during 1898 Abated during 1898
Total No. of **Summonses** or other **Legal Proceedings**
No. of Sink Wastes disconnected during 1898
,, ,, trapped ,,
No. of Closets constructed during 1898 Kinds
Any diseases peculiarly endemic in the district?
Any information as to number of deaths from cancer of all kinds during 1898?
Any information as to number of deaths from Tabes Mesenterica?
Vaccination—General efficiency

What action has been taken in regard to the following matters?

Seizure of Unsound Food Prosecutions
Samples under Sale of Food and Drugs Acts Prosecutions
River Pollution
Smoke Abatement No. of observations taken
Inspection of Factories and Workshops
Schools—No. in District No. closed on account of outbreaks of disease
Total duration of closure from this cause
Burial Grounds—No. in District Any need for extension?

The figures entered here should be the numbers *actually registered* in the District, without any correction whatever.

BIRTHS*—Males Females Total
Number illegitimate, included in the above
Any information as to Still Births

DEATHS*—Males Females Total
Number uncertified, included in the above

Cols. 2, 3, and 4 only apply to Urban Districts.

RATEABLE VALUE as stated in Valuation List.	Value upon which the General District Rate is Assessed.			Rate in the £ 1897.
	Full Rateable Value (Houses, etc.)	One-Fourth Rateable Value (Land, etc.)	Two-thirds Rateable Value (where owner is Assessed).	
(1)	(2)	(3)	(4)	

Sanitary Requirements of District and Suggestions of Medical Officer of Health:—

TABLE I. Area, Population, Births, Deaths.

SANITARY DISTRICT. *In Districts marked by an asterisk the rates are calculated after correction for non-residents.*	MEDICAL OFFICER OF HEALTH. (*Those whose names are printed in italics have ceased to hold Office.*)	AREA (Acres)	Estimated POPULATION 1898.	BIRTHS. Males	BIRTHS. Females	BIRTHS. Total	DEATHS. Males	DEATHS. Females	DEATHS. Total	ANNUAL RATES per thousand of Estimated Population. Birth Rate	Death Rate	Zymotic Death Rate	Phthisis Death Rate	Respiratory Death Rate	Infant Mortality (*Deaths under one year per 1000 Births.*)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
I. URBAN.															
Altofts	W. S. Mackenzie, L.P.C.P., L.R.C.S.	1837	4314	67	75	142	25	26	51	32·9	11·8	0·2	*nil*	3·5	134
Ardsley*	J. Townsley, M.B., C.M.	1284	6350	120	135	255	79	64	143	40·2	18·7	3·6	1·6	3·5	239
Ardsley, East and West	B. G. Ewing, M.B., C.M.	3836	7006	126	127	253	68	53	121	36·1	17·3	3·0	0·9	2·9	178
Baildon	A. Macvie, M.D.	2605	6057	57	71	128	47	42	89	21·1	14·7	1·0	1·7	3·5	109
Balby-cum-Hexthorpe*	J. Mitchell Wilson, M.D., D.P.H.	1613	5013	119	101	220	42	31	73	43·9	14·8	2·4	1·6	3·0	150
Barkisland	John Hoyle, M.B., C.M.	2421	1663	14	13	27	17	18	35	16·2	21·0	3·0	2·4	6·0	74
Barnoldswick*	F. E. Atkinson, L.R.C.P., M.R.C.S.	2129	6725	100	115	215	48	47	95	32.0	14·4	2·5	1·2	2·8	195
Barnsley Borough*	M. T. Sadler, M.D.	2386	40170	726	639	1365	505	405	910	34·0	21·5	4·0	1·9	4·0	219
Batley Borough*	J. A. Erskine Stuart, L.R.C.P.	2039	29682	415	440	855	271	269	540	28·8	18·7	3·2	1·5	3·6	161
Bingley*	*J. W. Craig, M.D.*	987	9476	101	92	193	86	74	160	20·4	17·0	0·7	1·4	3·3	155
Bingley Outer	G. R. MacGregor, M.D.	8276	5671	54	63	117	32	46	78	20·6	13·8	0·9	0·5	2·5	145
Birkenshaw	R. Forsyth, M.D.	925	2452	29	49	78	22	20	42	31·8	17·1	2·0	*nil*	5·3	231
Birstal	R. Forsyth, M.D.	1233	6360	98	109	207	56	60	116	32·5	18·2	1·7	1·6	4·2	159
Brighouse Borough*	F. W. Martin, M.R.C.S.	2224	23930	271	278	549	195	205	400	22·9	17·5	1·6	2·3	3·8	197
Burley-in-Wharfedale*	H. Hebblethwaite, M.R.C.S.	3133	2745	41	38	79	18	20	38	28·8	12·7	1·5	2·2	2·9	101
Calverley*	E. M. Jenkins, M.B., C.M.	2113	2749	20	27	47	25	32	57	17·1	14·9	*nil*	1·1	2·2	128
Castleford*	*E. W. Kemp, M.R.C.S.*	564	17515	316	284	600	174	145	319	34·3	18·4	3·3	0·6	2.1	233
Clayton*	G. H. Oliver, L.R.C.P	1464	5025	55	49	104	70	74	144	18·1	14·1	1·0	0·8	2·2	165
Clayton West	D. A. MacGregor, M.B., C.M.	1140	1634	17	15	32	19	8	27	19·6	16·5	1·2	0·6	4·3	250
Cleckheaton*	C. H. Dyer, M.B., C.M.	1755	12866	160	151	311	103	105	208	24·2	15·5	2·6	0·9	2·2	199
Darfield	R. F. Castle, M.B.	2017	4145	87	81	168	36	32	68	40·5	16·4	4·8	1·0	3·1	202
Darton*	*W. White, L.R.C.P., L.R.C.S.*	4358	7840	152	131	283	79	54	133	36·1	17·2	4·0	*nil*	2·6	170
Denby-and-Cumberworth	D. A. MacGregor, M.B., C.M.	4300	3265	46	45	91	15	23	38	27·9	11·6	1·2	0·3	4·3	132
Denholme	J. Jackson, F R.C.S., L.R.C.P.	2540	3028	34	31	65	20	14	34	21·5	10·1	0·3	0·7	2·3	77
Dewsbury Borough*	W. F. Watts, M.R.C.S.	1468	30000	365	340	705	359	302	661	23·5	19·1	2·9	1·4	3·6	177
Dodworth	H. Knowles, L.R.C.P.	1916	3194	60	49	109	30	23	53	34·1	16·6	2·2	0·9	0·9	183
Doncaster Borough*	J. Mitchell Wilson, M.D., D.P.H.	1691	30075	432	458	890	317	257	574	29·6	17·8	2·3	1·8	2·3	208
Drighlington	Robert Forsyth, M.D.	1136	4402	62	71	133	40	40	80	30·2	18·2	0·9	1·6	4·5	188
Eccleshill	*J. Pitney Aston, L.S.A.*	1220	8643	97	117	214	56	64	120	24·8	13·9	1·0	0·9	1·9	131
Elland	R. N. Denning, M.D., B.A.	1992	11450	137	113	250	72	72	144	21·8	12·6	0·8	1·3	2·3	172
Emley	R. H. Townend, M.B.	3556	1497	21	16	37	11	12	23	24.7	15·4	2·7	*nil*	5·3	216
Farnley Tyas	W. P. T. Daniel, L.R.C.P., D.P.H.	1785	588	6	2	8	3	4	7	13·6	11·9	*nil*	*nil*	*nil*	125
Farsley	F. W. Lambert, L R.C.P.	814	6087	69	61	130	32	54	86	21·4	14·1	2·0	1·0	3·3	92
Featherstone	A. Buncle, M.B., C.M.	4429	12419	231	208	439	121	112	233	35·3	18·8	2·0	0·8	2·8	248
Flockton	J. A. Smith, M.R.C.S.	1108	1238	15	14	29	12	6	18	23·4	14·5	2·4	0·8	2·4	172
Gildersome*	J. B. Brereton, L.R.C.P., L.R.C.S.	993	2977	51	49	100	37	25	62	33·6	20·5	2·4	1·3	3·7	160
Golcar*	A. G. Webster, M.R.C.S.	1593	10333	119	108	227	66	68	134	22·0	13·1	0·5	0·9	1·6	132
Gomersal*	H. O. Steele, M.R.C.S.	1096	3871	51	49	100	30	54	84	25·8	20·9	2·3	0·8	4·1	220
Goole*	J. Mitchell Wilson, M.D., D.P.H.	1441	20481	252	329	581	159	141	300	28·4	13·9	1·7	0·9	3·1	169
Greasborough	J.F.Cheesewright, L.R.C.P., M.R.C.S.	2412	3456	48	53	101	31	23	54	29·2	15·6	1·7	1·4	3·5	99
Greetland*	J. Brown, L.R.C.P., L.R.C.S.	641	4370	42	47	89	28	35	63	20·4	14·2	0·9	1·1	2·5	112
Guiseley	W. H. Cheetham, M.D., D.P.H.	1554	4373	78	70	148	50	29	79	33·8	18·1	2·3	0·9	3·7	155
Gunthwaite	D. A. MacGregor, M.B.. C.M.	2057	378	3	3	6	3	2	5	15·9	13·2	5·3	*nil*	*nil*	*nil*
Handsworth	A. W. Scott, M.D.	3638	12774	275	261	536	129	107	236	42·0	18·5	5·0	0·9	3·1	177
Harrogate Borough*	W. J. C. Ward, L.R.C.P., M.R.C.S.	1268	18381	199	192	391	132	158	290	21·3	13·6	1·5	0·8	1·7	148
Haworth*	F. E. Atkinson, L.R.C.P., M.R.C.S.	2234	8233	77	78	155	65	49	114	18·8	14·0	0·4	1·9	2·7	194
Hebden Bridge	J. Lawson, M.B., B.A.	478	7836	88	98	186	48	52	100	23·7	12·8	0·5	0·8	3·3	118
Heckmondwike*	H. T. Broughton, M.R.C.S.	697	10030	124	121	245	100	105	205	24·4	21·7	4·0	1·7	4·6	265
Hipperholme*	R. Davidson, M.D.	1138	3611	42	38	80	22	26	48	22.2	13·0	1·7	1·4	1·7	125
Holme	R. H. Trotter, M.B.	3390	412	4	3	7	3	1	4	17·0	9·7	*nil*	*nil*	2·4	143
Holmfirth	R. H. Trotter, M.B.	7770	9800	120	107	227	68	54	122	23·2	12·4	1.2	1·4	2·4	110
Honley*	R. H. Trotter, M.B.	2175	5133	61	57	118	72	54	126	23·0	15·2	0·2	0·6	2·3	119
Horbury*	B. Kemp, M.R.C.S.	1279	6172	94	101	195	71	61	132	31·6	22·2	3·9	1·5	3·4	231
Horsforth	H. Bailey, M.R.C.S.	2801	7706	106	105	211	65	69	134	27·4	17·4	4·4	2·1	2·9	123
Hoyland Nether*	W. L. Allott, M.R.C.S.	2085	11952	258	245	503	93	99	192	42·1	16·6	3·3	0·7	3·1	151
Hoylandswaine*	F. McDonald Swallow, L.R.C.P.	2024	583	2	3	5	7	4	11	8·6	20·6	3·4	1·7	3·4	200
Hunsworth	G. H Moorhead, L.R.C.P.	1380	1322	18	15	33	6	11	17	25·0	12·9	2·3	1·5	2·3	30
Idle*	R. Honeyburne, M.D.	1689	7484	83	102	185	61	55	116	24·7	16·2	1·7	1·6	4·0	108
Ilkley*	T. Johnstone, M.D.	3822	6641	70	71	141	50	42	92	21·2	11·3	0·2	1·4	2·6	99
Keighley Borough*	W. Scatterty, M.D.	3670	39985	591	604	1195	388	351	739	29·9	18·5	2·2	1·7	4·6	172
Kirkburton	J. Lockwood, M.R.C.S.	1286	2982	30	32	62	32	26	58	20·8	19·5	0·7	4·0	6·0	194
Kirkheaton	W. T. Smith, M.R.C.S.	1674	2552	41	34	75	20	15	35	29·4	13·7	0·4	2·0	3·1	27
Knaresborough*	I. D. Mackay, M.B., C.M.	470	4410	84	69	153	80	71	151	34·7	29·0	3·4	3·4	3·2	229
Knottingley*	T. Percival, M.R.C.S.	1481	5699	119	121	240	60	46	106	42·1	20·2	2·6	1·2	4·2	183
Lepton	W. T. Smith, M.R.C.S., L.R.C.S.	1863	2742	28	22	50	20	23	43	18·2	15·7	0·4	0·4	3·6	80
Linthwaite*	A. G Webster, M.R.C.S.	1320	7136	72	85	157	47	45	92	22·0	13·0	1·1	1·8	1·8	140
Liversedge	R. H. Shaw, M.R.C.S.	2130	14369	200	216	416	124	122	246	29·0	17·1	3·2	1·2	2·8	163
Luddendenfoot*	T. Crowther, M.D.	768	3275	33	24	57	18	24	42	17·4	12.5	0·3	1·5	2·4	158
Marsden	A. G. Webster, M.R.C.S.	8645	4297	56	71	127	35	36	71	29·6	16·5	0·9	1·6	2·1	150
Meltham*	T. A. Green, M.D.	5108	5290	68	46	114	28	51	79	21·5	15·5	0·9	1·1	2·6	175
Methley*	G. W. Wigin, M.R.C.S.	3492	4574	73	64	137	38	24	62	30·0	12·9	0·4	0·9	1·5	131
Mexborough*	F. G. Twigg, L.S.A.	1293	10200	216	205	421	122	93	215	41·3	20·7	6·2	1·0	3·1	185
Midgley*	T. Crowther, M.D.	2179	2208	20	24	44	24	18	42	19·9	18·6	*nil*	2·3	3·6	136
Mirfield*	T. B. Fairclough, L.R.C.P., L.R.C.S.	3393	11813	167	147	314	110	108	218	26·6	18·6	1·5	1·5	3·3	134
Monk Bretton	J. Blackburn, M.R.C.S.	2149	3686	57	77	134	34	42	76	36·4	20·6	1·4	0·5	6·8	201
Morley Borough	S. T. Steele, L.R.C.P., D.P.H.	3381	24337	357	346	703	210	200	410	28·9	16·8	2·5	1·1	3·7	185
Mytholmroyd*	J. H. Thompson, L.R.C.P., L.R.C.S.	6613	4309	53	32	85	32	24	56	19·7	13·9	0·5	0·9	1·4	94
Netherthong	R. H. Trotter, M.B.	639	835	7	9	16	4	5	9	19·2	10·8	1·2	3·6	1·2	*nil*
New Mill*	A. Thorp, M.R.C.S.	5680	5044	70	66	136	34	33	67	27·0	13·5	1·4	1·0	2·2	103
Normanton	W. S. Mackenzie, L.R.C.P., L.S.A.	1227	12192	227	220	447	101	94	195	36·7	16·0	3·2	0·8	2·6	199
North Bierley	T. Logan, M.D.	4309	23111	280	252	532	208	186	394	23·0	17·0	2·5	1·0	3·3	195
Northowram	E. G. Peck, L.R.C.P., M.A.	1572	2877	40	36	76	24	28	52	26·4	18·1	1·4	2·1	3·8	184
Oakworth*	F. E. Atkinson, L.R.C.P., M.R.C.S.	9200	5080	59	38	97	33	38	71	19·1	14·2	0·8	1·4	3·5	82
Ossett Borough*	G. S. Greenwood, L.R.C.P., D.P.H.	3105	11004	138	168	306	112	111	223	27·7	20·5	3·3	1·9	3·5	190
Otley*	W. E. Bennett, L.R.C.P., L.R.C.S.	2375	8706	123	119	242	85	74	159	27·8	18·1	1·7	1·5	3·0	174
Oxenhope	F. E. Atkinson, L.R.C.P., M.R.C.S.	4249	2498	32	26	58	23	19	42	23·2	16·8	0·4	1·2	4·0	103
Penistone*	J. A. Ross, M.B., C.M.	1133	2794	47	38	85	25	23	48	30·4	17·5	1·4	0·7	5·4	118
Pontefract Borough*	A. Hillaby, L.R.C.P.	4078	13035	213	219	432	116	107	223	33·2	15·2	2·0	1·1	2·1	141
Pudsey	W. L. Hunter, M.D , D.P.H.	2400	14330	173	200	373	130	133	263	26·0	18·4	2·1	1·3	2·6	142
Queensbury	E. G. Peck, L.R.C.P., M.A.	1471	6680	83	77	160	58	58	116	24·0	17.4	1·5	1·2	3·0	125
Ravensthorpe*	W. J. Richardson, M.D.	372	5833	76	66	142	68	63	131	24·3	22·5	2·6	1·7	7·4	254
Rawdon*	W. W. Chamberlain, M.B., C.M.	1559	2858	30	29	59	16	20	36	20·6	12·2	1·4	1·0	1·7	85
Rawmarsh	J. Picken, M.B., C.M.	2578	13840	267	234	501	146	121	267	36·2	19·3	3·8	1·2	3·3	206
Ripon City*	G. R. Green, L.R.C.P.	1582	7600	90	102	192	71	77	148	25·3	18·6	1·3	0·5	3·2	135
Rishworth	H. G. Huie, M.D.	6548	899	10	16	26	13	10	23	28·9	25·6	4·4	2·2	4·4	*nil*
Rotherham Borough*	A. Robinson, M.D., D.P.H.	6002	48274	896	889	1785	452	419	871	37·0	17·7	2·8	1·1	3·3	161
Rothwell	R. Stevenson, L.R.C.P., L.R.C.S.	5742	11360	195	171	366	66	70	136	32·2	12·0	1·4	0·6	2·2	104
Roystone	R. B. Eskrigge, L.R.C.P.	1022	4804	76	107	183	33	36	69	38·1	14·4	0·8	0·4	3·7	169
Sandal Magna	A. S. Williamson, M.B , C,M.	1617	5772	117	97	214	54	57	111	37·1	19·2	4·5	0·9	2·9	145
Scammonden	A. G. Webster, M.R.C.S.	1806	366	4	6	10	1	8	9	27·3	24·6	2·7	2·7	*nil*	100
Selby*	J. Mitchell Wilson, M.D., D.P.H.	3870	6197	92	100	192	70	55	125	31·0	19·7	1·3	1·5	1·9	141
Shelf*	W. R. Thompson, L.R.C.P.	1302	2513	24	34	58	18	22	40	23·1	16·3	1·6	1·2	2·8	155
Shelley	D. A. MacGregor, M.B., C.M.	1568	1538	14	23	37	14	12	26	24·1	16·9	0·6	2·0	2·0	108
Shepley	D. A. MacGregor, M.B., C.M.	1247	1827	22	28	50	14	16	30	27·4	16·4	*nil*	2·2	2·2	80
Shipley*	W. Foster, M.B., D.P.H.	2179	24588	305	303	608	204	210	414	24·7	16·8	1·8	1·3	3·5	169
Silsden*	F. E. Atkinson, L.R.C.P., M.R.C.S.	7060	4309	67	70	137	30	33	63	31·8	15·8	1·6	0·9	3·0	109
Skelmanthorpe	D. A. MacGregor, M.B., C.M.	1162	3600	53	31	84	38	17	55	23·3	15·3	1·4	0·6	2·8	179
Skipton*	F. E. Atkinson, L.R.C.P., M.R.C.S.	4245	11367	172	159	331	111	98	209	29·1	16·7	2.2	1·6	4·5	160
Slaithwaite	A. G. Webster, M.R.C.S.	3170	5143	60	52	112	41	37	78	21·8	15·2	1·4	1·4	2·1	125
Soothill Nether	C. Clay, M.R.C.S.	562	5958	81	74	155	61	55	116	26·0	19·8	2·0	0·5	5·4	206
Soothill Upper	R. Beattie, M.D.	1897	6408	78	79	157	53	60	113	24·5	17·6	3·4	0·8	5·0	134
South Crosland	T. Smailes, M.D., D.P.H.	1810	3100	42	23	65	25	18	43	21·0	13·9	1·0	0·6	3·5	138
Southowram*	B. E. I. Edwards, M.B., C.M.	1825	3074	39	37	76	36	28	64	24·7	20·2	2·6	2·6	3·9	224
Sowerby	E. D. Wellburn, L.R.C.P., L.R.C.S.	2399	3787	28	36	64	29	39	68	16·9	18·0	0·5	2·4	4·0	94
Sowerby Bridge*	E. D. Wellburn, L.R.C.P., L.R.C.S.	571	11840	125	121	246	76	72	148	20·8	12·8	1·4	0·7	2·0	159
Soyland	J. Hoyle, M.B., C.M.	4270	3197	27	41	68	27	28	55	21·3	17·2	4·1	3·1	3·4	74
Springhead	E. Wakelam, L.R.C.P.	550	3608	45	56	101	35	36	71	28·0	19·7	0·8	5·0	3·6	178
Stainland*	A. E. Woodcock, L.R.C.P.	2335	5052	57	37	94	36	37	73	18·6	14·6	2·6	0·4	2·2	191
Stocksbridge	W. M. Robertshaw, M.B., C.M.	3984	6650	106	122	228	55	52	107	34·3	16·1	2·1	2·3	3·6	123
Swinton	*W. Makeig Jones, M.R.C.S., D.P.H.*	1700	11200	230	208	438	106	80	186	39·1	16·6	1·6	0·9	2·5	180
Thornhill*	A. E. Sellers, L.R.C.P., M.R.C.S.	3602	10200	118	127	245	74	71	145	24·0	14·3	2·2	1·4	2·5	159
Thornton	A. E. Tunstall, L.R.C.P.	2245	5404	59	79	138	49	47	96	25·5	17·8	1·3	1·7	3·9	138
Thurlstone*	A. C. J. Wilson, L.R.C.P., M.R.C.S.	8117	2648	46	41	87	32	28	60	32·9	21·9	1·5	1·5	4·9	161
Thurstonland	W. P. T. Daniel, L.R.C.P., D.P.H.	2106	889	7	4	11	2	3	5	12·4	5·6	*nil*	*nil*	4·5	*nil*
Tickhill*	J. Mitchell Wilson, M.D., D.P.H.	5579	1433	27	22	49	15	11	26	34·2	20.2	1·4	4·2	2·8	163
Todmorden Borough*	C. W. Thorp, F.R.C.S., L.R.C.P.	12755	25112	295	295	590	262	243	505	23·5	20·4	1·9	1·4	4·5	163
Tong	G. H. Moorhead, L.R.C.P.	2657	8034	118	107	225	65	60	125	28·0	15·6	1·6	1·2	3·5	169
Uppermill	W.H.F. Ramsden, L.R.C.P., M.R.C.S.	74	1799	16	16	32	17	9	26	17·8	14·5	2·2	1·1	2·8	187
Wakefield City*	W. S. Wade, L.R.C.P.	1798	37346	526	513	1039	473	366	839	29·0	19·4	2·4	2·3	4·0	177
Warley*	T. Crowther, M.D.	3354	2713	28	33	61	12	21	33	22·5	12·5	1·1	1·1	2·6	98
Wath*	F. J. Burman, L.R.C.P., M.R.C.S.	2353	8446	184	172	356	82	61	143	42·1	16·8	4·3	0·2	2·7	183
Whitley Upper	J. Lockwood, M.R.C.S.	2053	800	9	15	24	7	2	9	30·0	11·3	2·5	1·2	*nil*	83
Whitwood	G. B. Hillman, L.S.A.	1082	5389	119	122	241	60	52	112	44·7	20·8	3·9	1·3	3·7	212
Wilsden	*W. A. Shillito, M.R.C.S.*	2638	2626	48	49	97	16	25	41	36·9	15·6	1·5	1·1	3·8	82
Wombwell	J. N. Millar, M.B., C.M.	3851	13196	287	269	556	102	102	204	42·1	15·5	4·0	1·3	2·5	173
Worsborough*	M. T. Sadler, M.D.	3779	11121	198	212	410	103	87	190	36·9	17·8	2·6	1·5	3·1	193
Yeadon	C. J. R. McLean, M.D., D.P.H.	1723	8091	102	100	202	49	54	103	25·0	12·7	0·7	0·7	2·3	94
	Total of Urban Districts	364008	1127442	16357	16127	32484	10315	9473	19788	28·8	17·5	2·3	1·3	3·3	170
II. RURAL.															
Barnsley*	M. T. Sadler, M.D.	11276	6390	132	97	229	64	46	110	35·8	18·2	1·4	0·9	3·1	179
Bishopthorpe*	A. Raimes, M.D.	6410	1942	23	25	48	20	13	33	24·7	14·9	*nil*	0·5	2·1	167
Bowland	J. J. Smithies, L.F.P.S.G., L.R.C.P.	77027	4936	56	61	117	39	22	61	23·7	12·4	*nil*	0·6	2·4	43
Doncaster*	J. Mitchell Wilson, M.D., D.P.H.	93998	25214	580	581	1161	237	238	475	46·0	19·3	2·9	1·4	3·2	168
Goole*	J. Mitchell Wilson, M.D., D.P.H.	38238	7891	95	130	225	65	60	125	28·5	17·2	2·4	1·0	3·3	187
Great Ouseburn*	C. E. Lownds, L.R.C.P.	46752	9719	117	128	245	95	63	158	25·2	16·4	1·1	0·9	2·1	114
Halifax*	F. A. Storr, D.P.H.	9728	8483	120	117	237	71	63	134	27·9	15·1	1·6	1·8	3·2	131
Hemsworth*	G. E. Coleman, L.R.C.P., M.R.C.S.	34735	17865	381	374	755	204	170	374	42·3	21·0	4·9	0·7	5·4	183
Hunslet	J. Buck, L.R.C.P	6396	6485	117	94	211	56	55	111	32·5	17·1	2·0	0·8	3·1	137
Keighley*	F. E. Atkinson, L.R.C.P., M.R.C.S.	8130	6016	55	57	112	51	42	93	18·6	10·8	0·5	0·7	3·5	125
Kiveton Park	C. Wills, M.R.C.S.	20070	7195	105	103	208	40	53	93	28·9	12·9	1·5	1·3	2·4	139
Knaresborough	J. T. Hislop, L.R.C.P.	39498	8925	202	191	393	85	110	195	44·0	21·8	2·7	2·0	3·6	165
Leeds*(Roundhay & Seacroft)	B. Baskett, M.B.	3290	1978	30	26	56	18	14	32	28·3	12·1	*nil*	1·5	2·0	89
Pateley Bridge*	G. Lumsden, M.B., C.M.	75063	7002	108	103	211	80	82	162	30·1	23·6	0·1	1·3	4·4	142
Penistone*	F. McDonald Swallow, LRCP., LRCS.	16213	6044	104	108	212	45	57	102	35·1	17·4	1·7	1.5	4·0	108
Pontefract*	T. Percival, M.R.C.S.	38980	11666	229	198	427	118	89	207	36·6	18·2	1·4	0·9	3·8	164
Ripon	T. Collier, M.R.C.S.	50103	5468	50	59	109	37	34	71	19·9	13·0	0·5	0·5	1·1	55
Rotherham*	L. J. Weatherbe, M.B., C.M.	35274	16582	313	281	594	162	125	287	35·8	17·4	2·7	0·8	3·4	182
Saddleworth	W. H. F. Ramsden, L.R.C.P., M.R.C.S.	17858	13089	155	152	307	99	98	197	23·5	15·1	0·5	1·1	2·1	104
Sedbergh	F. E. Atkinson, L.R.C.P., M.R.C.S.	52665	4012	40	29	69	24	28	52	17·2	13·0	1·7	1·0	1·0	43
Selby*	J. Mitchell Wilson, M.D., D.P.H.	34752	5761	80	78	158	42	38	80	27·4	14·4	1·4	0·7	1·9	152
Settle*	F. E. Atkinson, L.R.C.P., M.R.C.S.	151942	14270	163	191	354	117	113	230	24·8	16·0	1.1	1·1	2·6	121
Skipton*	F. E Atkinson, L.R.C.P., M.R.C.S.	145757	20498	302	279	581	140	200	340	28·3	17·2	0·5	1·4	3·5	117
Tadcaster	J. Mitchell Wilson, M.D., D.P.H.	72801	27556	491	460	951	245	247	492	34·5	17·9	1·7	0·8	3·0	150
Thorne*	H. W. Arbuckle, M.D., D.P.H.	38486	6524	104	89	193	70	55	125	29·6	17·6	0·8	1·1	3·4	93
Todmorden	J. Lawson, M.B., B.A.	18276	4757	50	57	107	50	35	85	22·5	17·9	0·2	1·3	2·7	140
Wakefield	J. J. Jackson, L.R.C.P.	23072	28155	556	510	1066	265	270	535	37·9	19·0	4·2	1·2	3·8	198
Wetherby	J. A. Hargreaves, M.B.	65750	14200	194	169	363	125	127	252	25·6	17·7	1·3	1·4	2·5	121
Wharfedale, N. Div.*	R. E. Williamson, M.B.	38081	3324	49	46	95	39	21	60	27·4	9·0	0.3	1·2	4·2	44
Do. S. Div.*	W. H. Cheetham, M.D., D.P.H.	13366	4575	46	41	87	106	114	220	30·2	13·2	0·7	1·0	1·7	115
Wortley, 1st Div.*	J. Snadden, M.B., C.M.	15720	19289	366	357	723	186	154	340	37·5	17·7	3·4	1·1	2·7	167
Do. 2nd Div.*	E. W. D. Kite, M.B.	12493	14382	270	241	511	248	164	412	40·3	18·2	1.3	1·4	4·1	141
Do. 3rd Div.	J. Snadden, M.B., C.M.	24515	4703	59	69	128	31	35	66	27·2	14·0	0·6	1·5	3·4	141
	Total of Rural Districts	1336775	344896	5742	5501	11243	3274	3035	6309	32·6	17·4	2·1	1·1	3·2	151
	Grand Total for the Administrative County	1700783	1472338	22099	21628	43727	13589	12508	26097	29·7	17·7	2·2	1·3	3·3	165
	Column	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Dewsbury Borough*	..	W. F. Watts, M.R.C.S.	1468	30000	365	340	705	359	302	661	23·5	19·1	2·9	1·4	3·6	177
Dodworth .	..	H. Knowles, L.R.C.P.	1916	3194	60	49	109	30	23	53	34·1	16·6	2·2	0·9	0·9	183
Doncaster Borough*	..	J. Mitchell Wilson, M.D., D.P.H. ..	1691	30075	432	458	890	317	257	574	29·6	17·8	2·3	1·8	2·3	208
Drighlington ..	..	Robert Forsyth, M.D.	1136	4402	62	71	133	40	40	80	30·2	18·2	0·9	1·6	4·5	188
Eccleshill ..	..	*J. Pitney Aston, L.S.A.*	1220	8643	97	117	214	56	64	120	24·8	13·9	1·0	0·9	1·9	131
Elland	..	R. N. Denning, M.D., B.A.	1992	11450	137	113	250	72	72	144	21·8	12·6	0·8	1·3	2·3	172
Emley	..	R. H. Townend, M.B.	3556	1497	21	16	37	11	12	23	24.7	15·4	2·7	*nil*	5.3	216
Farnley Tyas ..	..	W. P. T. Daniel, L.R.C.P., D.P.H.	1785	588	6	2	8	3	4	7	13·6	11·9	*nil*	*nil*	*nil*	125
Farsley	..	F. W. Lambert, L.R.C.P.	814	6087	69	61	130	32	54	86	21·4	14·1	2·0	1·0	3·3	92
Featherstone ..	..	A. Buncle, M.B., C.M.	4429	12419	231	208	439	121	112	233	35·3	18·8	2·0	0·8	2·8	248
Flockton	..	J. A. Smith, M.R.C.S.	1108	1238	15	14	29	12	6	18	23·4	14·5	2·4	0·8	2·4	172
Gildersome* ..	..	J. B. Brereton, L.R.C.P., L.R.C.S...	993	2977	51	49	100	37	25	62	33·6	20·5	2·4	1·3	3·7	160
Golcar*	..	A. G. Webster, M.R.C.S.	1593	10333	119	108	227	66	68	134	22·0	13·1	0·5	0·9	1·6	132
Gomersal* ..	..	H. O. Steele, M.R.C.S.	1096	3871	51	49	100	30	54	84	25·8	20·9	2·3	0·8	4·1	220
Goole*	..	J. Mitchell Wilson, M.D., D.P.H. ..	1441	20481	252	329	581	159	141	300	28·4	13·9	1·7	0·9	3·1	169
Greasborough ..	..	J.F.Cheesewright,L.R.C.P., M.R.C.S.	2412	3456	48	53	101	31	23	54	29·2	15·6	1·7	1·4	3·5	99
Greetland* ..	..	J. Brown, L.R.C.P., L.R.C.S. ..	641	4370	42	47	89	28	35	63	20·4	14·2	0·9	1·1	2·5	112
Guiseley	..	W. H. Cheetham, M.D., D.P.H. ..	1554	4373	78	70	148	50	29	79	33·8	18·1	2·3	0·9	3·7	155
Gunthwaite ..	..	D. A. MacGregor, M.B., C.M. ..	2057	378	3	3	6	3	2	5	15·9	13·2	5·3	*nil*	*nil*	*nil*
Handsworth ..	..	A. W. Scott, M.D.	3638	12774	275	261	536	129	107	236	42·0	18·5	5·0	0·9	3·1	177
Harrogate Borough*	..	W. J. C. Ward, L.R.C.P., M.R.C.S.	1268	18381	199	192	391	132	158	290	21·3	13·6	1·5	0·8	1·7	148
Haworth* ..	..	F. E. Atkinson, L.R.C.P., M.R.C.S.	2234	8233	77	78	155	65	49	114	18·8	14·0	0·4	1·9	2·7	194
Hebden Bridge ..	..	J. Lawson, M.B., B.A.	478	7836	88	98	186	48	52	100	23·7	12·8	0·5	0·8	3·3	118
Heckmondwike* ..	..	H. T. Broughton, M.R.C.S.	697	10030	124	121	245	100	105	205	24·4	21·7	4·0	1·7	4·6	265
Hipperholme* ..	..	R. Davidson, M.D.	1138	3611	42	38	80	22	26	48	22.2	13·0	1·7	1·4	1·7	125
Holme	..	R. H. Trotter, M.B.	3390	412	4	3	7	3	1	4	17·0	9·7	*nil*	*nil*	2·4	143
Holmfirth	..	R. H. Trotter, M.B.	7770	9800	120	107	227	68	54	122	23·2	12·4	1.2	1·4	2·4	110
Honley*	..	R. H. Trotter, M.B.	2175	5133	61	57	118	72	54	126	23·0	15·2	0·2	0·6	2·3	119
Horbury*	..	B. Kemp, M.R.C.S.	1279	6172	94	101	195	71	61	132	31·6	22·2	3·9	1·5	3·4	231
Horsforth ..	..	H. Bailey, M.R.C.S.	2801	7706	106	105	211	65	69	134	27·4	17·4	4·4	2·1	2·9	123
Hoyland Nether*..	..	W. L. Allott, M.R.C.S.	2085	11952	258	245	503	93	99	192	42·1	16·6	3·3	0·7	3·1	151
Hoylandswaine* ..	..	F. McDonald Swallow, L.R.C.P. ..	2024	583	2	3	5	7	4	11	8·6	20·6	3·4	1·7	3·4	200
Hunsworth ..	..	G. H Moorhead, L.R.C.P.	1380	1322	18	15	33	6	11	17	25·0	12·9	2·3	1·5	2·3	30
Idle*	..	R. Honeyburne, M.D.	1689	7484	83	102	185	61	55	116	24·7	16·2	1·7	1·6	4·0	108
Ilkley*	..	T. Johnstone, M.D.	3822	6641	70	71	141	50	42	92	21·2	11·3	0·2	1·4	2·6	99
Keighley Borough*	..	W. Scatterty, M.D.	3670	39985	591	604	1195	388	351	739	29·9	18·5	2·2	1·7	4·6	172
Kirkburton ..	..	J. Lockwood, M.R.C.S.	1286	2982	30	32	62	32	26	58	20·8	19·5	0·7	4·0	6·0	194
Kirkheaton ..	..	W. T. Smith, M.R.C.S.	1674	2552	41	34	75	20	15	35	29·4	13·7	0·4	2·0	3·1	27
Knaresborough* ..	..	I. D. Mackay, M.B., C.M.	470	4410	84	69	153	80	71	151	34·7	29·0	3·4	3·4	3·2	229
Knottingley* ..	..	T. Percival, M.R.C.S.	1481	5699	119	121	240	60	46	106	42·1	20·2	2·6	1·2	4·2	183
Lepton	..	W. T. Smith, M.R.C.S., L.R.C.S. ..	1863	2742	28	22	50	20	23	43	18·2	15·7	0·4	0·4	3·6	80

TABLE II. Deaths at certain Ages and from certain specified Causes.

SANITARY DISTRICT.	DEATHS AT SUBJOINED AGES.						DEATHS FROM SUBJOINED CAUSES.																
											FEVERS												
	Under 1 Year	1 and under 5	5 an under 15	15 and under 25	25 and under 65	65 and upwards	Small Pox	Scarlet Fever	Diphtheria	Croup	Typhus	Enteric	Continued	Puerperal	Erysipelas	Measles	Whooping Cough	Diarrhœa	Rheumatic Fever	Phthisis	Bronchitis, Pneumonia, & Pleurisy	Heart Disease	Injuries
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
I. URBAN.																							
Altofts	19	7	4	1	10	10	-	1	-	-	-	-	-	-	1	-	-	-	-	-	15	2	4
Ardsley	61	24	5	10	34	9	-	4	-	-	-	20	-	-	-	6	-	15	-	10	22	12	3
Ardsley East and West ..	45	27	7	7	16	19	-	2	-	2	-	-	-	-	-	10	2	5	-	6	20	6	4
Baildon	14	15	5	7	25	23	-	-	2	-	-	1	-	-	-	2	1	-	-	10	21	11	1
Balby-cum-Hexthorpe ..	33	8	2	1	17	12	-	-	-	1	-	-	-	-	-	3	1	7	-	8	15	4	1
Barkisland	2	5	1	4	13	10	-	-	-	-	-	-	-	-	-	4	-	1	-	4	10	4	1
Barnoldswick ..	42	16	4	6	15	12	-	6	-	-	-	-	-	-	-	1	1	9	-	8	19	2	3
Barnsley Borough ..	299	131	35	40	244	161	-	-	4	-	-	12	-	3	1	22	37	76	-	76	159	60	37
Batley Borough ..	138	88	25	26	175	88	-	10	6	2	-	15	-	-	1	12	20	30	2	45	102	46	35
Bingley	30	17	4	8	53	48	-	-	-	2	-	-	-	-	1	-	-	5	-	13	31	13	2
Bingley Outer ..	17	10	2	4	22	23	-	-	-	1	-	1	-	-	-	-	-	3	-	3	14	12	2
Birkenshaw	18	5	-	-	7	12	-	1	-	-	-	-	-	-	-	-	3	1	-	-	13	2	-
Birstal	33	16	8	7	24	28	-	2	1	-	-	2	-	-	-	-	1	5	-	10	27	8	1
Brighouse Borough ..	108	52	23	25	127	65	-	1	2	1	-	2	-	-	1	12	1	16	8	54	88	35	3
Burley-in-Wharfedale ..	8	1	1	2	16	10	-	-	-	-	-	1	1	-	-	-	2	-	-	8	8	5	1
Calverley	6	4	8	4	24	11	-	6	1	-	-	9	-	-	-	-	-	-	-	3	6	4	-
Castleford	140	79	7	7	40	46	-	-	-	1	-	-	1	-	-	13	8	35	-	10	36	15	4
Clayton	19	11	2	1	57	54	-	-	1	-	-	1	-	-	-	-	3	-	-	7	12	22	5
Clayton West ..	8	3	1	1	6	8	-	-	-	1	-	-	-	-	-	-	-	1	-	1	7	4	3
Cleckheaton	62	29	9	9	58	41	-	-	3	-	-	4	-	-	-	3	2	22	-	12	28	18	2
Darfield	34	10	3	4	14	3	-	-	-	-	-	1	-	-	-	1	7	11	-	4	13	4	1
Darton	48	33	6	5	28	13	-	1	3	-	-	3	-	-	-	12	8	4	-	-	20	7	2
Denby-and-Cumberworth ..	12	4	1	2	6	13	-	-	-	-	-	-	-	-	-	-	2	2	1	1	14	2	-
Denholme	5	5	-	-	9	15	-	-	-	-	-	-	-	-	-	-	-	1	1	2	7	3	1
Dewsbury Borough	125	94	22	33	251	136	-	11	2	2	-	7	1	-	-	41	4	20	4	49	121	72	14
Dodworth	20	4	1	5	12	11	-	1	-	-	-	1	-	-	-	-	-	5	1	3	3	4	3
Doncaster Borough ..	185	67	19	30	149	124	-	1	2	1	-	6	-	-	2	21	11	27	-	63	72	43	15
Drighlington ..	25	9	1	5	28	12	-	-	-	-	-	-	-	-	2	4	-	-	-	7	20	8	-
Eccleshill ..	28	13	3	4	34	38	-	-	-	-	-	1	-	-	-	5	1	2	-	8	16	12	3
Elland	43	16	2	5	42	36	-	-	-	-	-	1	-	-	-	1	1	6	1	15	26	5	-
Emley	8	5	2	-	4	4	-	1	-	-	-	-	-	1	-	-	3	-	-	-	8	-	-
Farnley Tyas ..	1	1	-	-	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-
Farsley	12	8	2	6	31	27	-	1	2	1	-	-	-	-	-	1	-	7	-	6	20	17	1
Featherstone	109	55	6	10	38	15	-	-	2	-	-	3	-	1	-	15	4	1	-	10	35	11	8
Flockton	5	3	2	1	2	5	-	1	1	-	-	-	-	-	-	-	-	1	-	1	3	1	-
Gildersome	16	10	6	2	14	14	-	-	1	-	-	1	-	-	-	3	-	3	-	4	11	4	2
Golcar	30	16	3	7	42	36	-	-	-	-	-	1	-	1	-	3	-	1	-	9	17	11	5
Gomersal	22	6	6	6	25	19	-	-	1	1	-	3	-	-	-	-	-	4	-	3	17	13	-
Goole	98	39	19	14	82	48	-	3	2	4	-	4	-	1	-	4	2	17	-	19	66	19	9
Greasborough ..	10	5	4	1	20	14	-	-	-	2	-	1	-	-	-	-	-	3	-	5	12	-	-
Greetland	10	3	2	-	26	22	-	-	-	-	-	1	-	-	-	1	1	1	1	5	11	4	-
Guiseley	23	16	-	2	19	19	-	-	-	2	-	-	-	-	-	-	6	2	-	4	16	7	3
Gunthwaite	-	-	-	1	1	3	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	1	-
Handsworth	95	56	6	8	49	22	-	1	2	1	-	2	-	-	-	12	13	33	-	12	39	11	5
Harrogate Borough ..	58	18	5	18	101	90	-	-	2	-	-	2	-	2	2	-	6	20	-	17	36	39	8
Haworth	30	5	7	5	38	29	-	-	1	1	-	-	-	-	-	-	-	1	-	16	22	13	6
Hebden Bridge ..	22	5	7	4	37	25	-	-	1	-	-	2	1	-	1	-	-	-	1	6	26	8	1
Heckmondwike ..	65	33	9	8	58	32	-	-	-	-	-	4	-	-	-	18	9	9	-	15	42	10	1
Hipperholme ..	10	2	1	1	22	12	-	-	-	-	-	4	-	-	-	-	-	2	-	5	6	9	1
Holme	1	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
Holmfirth	25	13	-	4	42	38	-	-	-	-	-	1	-	-	-	3	4	3	-	14	24	11	7
Honley	14	7	1	7	44	53	-	-	1	-	-	-	-	-	-	-	-	-	1	8	19	13	3
Horbury	45	17	5	5	37	23	-	1	-	2	-	1	-	-	-	5	5	8	-	9	21	7	12
Horsforth	26	20	9	8	39	32	-	6	8	4	-	1	-	-	-	3	7	5	1	16	22	11	1
Hoyland Nether ..	76	34	6	8	38	30	-	5	-	3	-	5	-	-	-	5	1	15	1	8	37	5	8
Hoylandswaine ..	1	1	-	-	7	2	-	-	-	-	-	1	-	-	-	-	-	1	-	1	2	-	1
Hunsworth	1	4	-	1	7	4	-	-	-	-	-	1	-	-	-	1	-	1	-	2	3	-	-
Idle	20	11	5	5	40	35	-	-	-	-	-	-	-	-	-	-	4	6	2	12	29	11	5
Ilkley	14	8	-	7	22	41	-	-	-	-	-	-	-	-	-	-	1	-	-	13	19	6	1
Keighley Borough ..	205	74	35	38	253	134	-	3	28	4	-	4	-	-	-	4	3	21	2	66	182	54	10
Kirkburton	12	4	-	1	21	20	-	-	-	1	-	-	-	-	-	-	-	1	-	12	18	3	-
Kirkheaton	2	2	3	2	13	13	-	1	-	-	-	-	-	-	-	-	-	-	-	5	8	4	-
Knaresborough ..	35	18	6	7	33	52	-	1	1	6	-	-	-	-	-	1	1	5	1	15	14	12	4
Knottingley	44	19	9	1	12	21	-	4	-	-	-	1	-	-	-	6	2	2	-	7	24	8	5
Lepton	4	3	4	1	11	20	-	1	-	-	-	-	-	-	-	-	-	-	-	1	10	3	1
Linthwaite	22	11	-	11	29	19	-	-	-	-	-	1	-	1	-	4	-	3	2	13	13	8	1
Liversedge	68	34	12	12	63	57	-	-	2	-	-	18	-	1	-	6	4	10	2	17	40	13	-
Luddendenfoot ..	9	4	3	3	12	11	-	-	-	-	-	1	-	-	-	-	-	-	-	5	8	4	2
Marsden	19	4	2	5	23	18	-	-	-	-	-	1	-	-	-	1	-	2	1	7	9	3	6
Meltham	20	4	6	2	34	13	-	-	-	-	-	1	-	-	1	-	-	4	1	6	13	10	-
Methley	18	5	2	4	18	15	-	-	-	-	-	-	-	-	-	-	-	2	-	4	7	7	4
Mexborough ..	78	47	9	10	44	27	-	5	1	-	-	3	-	-	-	26	7	22	-	10	32	10	13
Midgley	6	-	1	2	14	19	-	-	-	-	-	-	-	-	-	-	-	-	1	5	8	5	2
Mirfield	42	15	12	12	82	55	-	3	-	1	-	2	-	1	-	2	2	9	1	18	39	20	13
Monk Bretton ..	27	12	1	5	12	19	-	1	-	-	-	1	-	-	-	1	-	2	-	2	25	4	7
Morley Borough ..	130	54	28	19	123	56	-	11	1	4	-	9	-	1	1	3	3	30	3	26	90	19	9
Mytholmroyd ..	8	-	1	2	25	20	-	-	-	-	-	1	-	1	-	-	-	-	-	4	6	10	5
Netherthong	-	2	-	-	4	3	-	-	-	-	-	-	-	-	-	-	-	1	-	3	1	-	-
New Mill	14	8	4	4	23	14	-	-	-	3	-	-	-	-	-	-	1	3	-	5	11	9	-
Normanton	89	22	11	5	41	27	-	3	2	-	-	3	-	-	2	-	-	31	-	10	32	15	2
North Bierley ..	104	48	13	18	91	120	-	3	3	-	-	7	-	2	-	17	6	21	1	23	77	42	7
Northowram ..	14	3	2	4	12	17	-	1	-	-	-	-	-	-	-	2	1	-	-	6	11	4	1
Oakworth	8	2	5	1	21	34	-	-	-	-	-	2	-	-	-	-	1	1	-	7	18	10	2
Ossett Borough ..	58	32	12	10	67	44	-	1	-	4	-	4	-	1	2	9	-	18	1	21	39	13	3
Otley	42	19	12	5	50	31	-	-	4	1	-	1	-	-	2	-	7	2	-	13	26	16	-
Oxenhope	6	3	2	5	6	20	-	-	1	-	-	-	-	-	-	-	-	-	1	3	10	6	1
Penistone	10	6	1	2	18	11	-	-	3	-	-	-	-	-	-	-	1	-	-	2	15	7	3
Pontefract Borough ..	61	29	10	9	61	53	-	1	-	-	-	-	-	1	-	2	-	23	1	17	38	11	4
Pudsey	53	32	9	7	102	60	-	4	2	3	-	7	-	1	1	3	-	11	1	19	37	19	2
Queensbury	20	15	11	9	33	28	-	-	1	-	-	-	-	1	-	8	-	1	1	8	20	11	3
Ravensthorpe ..	36	20	10	7	34	24	-	1	-	1	-	1	-	-	-	1	2	8	1	10	43	15	-
Rawdon	5	3	-	2	10	16	-	-	-	-	-	-	-	-	-	4	-	-	-	3	5	-	1
Rawmarsh	103	50	4	18	61	31	-	10	-	-	-	1	-	-	-	3	10	28	-	17	45	14	7
Ripon City	26	10	7	5	39	61	-	-	-	1	-	2	-	-	-	-	2	6	-	4	24	16	4
Rishworth	-	1	1	2	6	13	-	2	-	-	-	1	-	-	1	-	-	1	1	2	4	1	1
Rotherham Borough ..	288	126	22	48	211	176	-	13	-	5	-	12	-	2	-	28	8	68	-	55	161	59	7
Rothwell	38	23	10	2	36	27	-	2	-	-	-	-	-	-	-	4	4	6	-	7	25	11	10
Royston	31	13	4	1	14	6	-	-	-	-	-	-	-	-	-	2	-	2	-	2	18	6	10
Sandal Magna ..	31	16	1	3	32	28	-	1	1	-	-	2	-	-	-	4	3	15	-	5	17	5	1
Scammonden	1	-	-	-	3	5	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	1	-
Selby	27	7	5	4	38	44	-	-	-	-	-	-	-	-	-	-	1	7	-	9	13	4	2
Shelf	9	3	-	2	12	14	-	-	-	-	-	-	-	-	-	2	1	-	-	3	7	2	1
Shelley	4	1	3	1	10	7	-	-	-	-	-	-	-	-	-	-	-	1	-	3	3	6	2
Shepley	4	1	2	3	13	7	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	7	-
Shipley	103	73	14	17	115	92	-	5	2	4	-	6	-	-	1	15	6	7	2	32	85	40	15
Silsden	15	6	3	2	11	26	-	-	2	2	-	-	-	-	-	-	-	3	-	4	13	11	-
Skelmanthorpe ..	15	4	3	-	20	13	-	2	-	-	-	1	-	-	1	-	-	2	-	2	10	6	2
Skipton	53	29	7	10	62	48	-	-	-	-	-	3	-	-	-	5	15	2	-	18	57	20	3
Slaithwaite	14	6	4	4	24	26	-	1	-	-	-	1	-	-	-	-	-	5	3	7	11	5	2
Soothill Nether ..	32	18	5	4	31	26	-	1	-	-	-	2	-	1	-	7	1	1	1	3	32	12	-
Soothill Upper ..	21	15	2	8	38	29	-	2	3	1	-	4	-	-	1	3	-	9	-	5	32	9	1
South Crosland ..	9	4	1	2	15	12	-	-	-	-	-	-	-	-	-	1	-	2	-	2	11	4	-
Southowram	17	7	6	3	19	12	-	-	1	-	-	-	-	-	-	2	4	2	1	8	12	3	-
Sowerby	6	3	3	3	24	29	-	2	-	-	-	-	-	-	-	-	-	-	-	9	15	10	-
Sowerby Bridge ..	39	13	6	5	51	34	-	6	-	-	-	4	-	-	-	-	1	6	-	6	23	12	2
Soyland	5	12	5	2	12	19	-	-	5	1	-	-	-	-	-	7	-	-	-	10	11	4	-
Springhead	18	10	-	5	22	16	-	-	-	-	-	-	-	-	-	1	1	1	-	18	13	10	-
Stainland	18	12	2	2	17	22	-	-	-	1	-	1	-	-	-	5	1	4	-	2	11	4	2
Stocksbridge	28	12	5	8	39	15	-	-	1	1	-	2	-	-	-	-	-	10	-	15	24	5	1
Swinton	79	24	7	11	44	21	-	2	-	-	-	5	-	4	-	4	2	5	-	10	28	13	8
Thornhill	39	22	4	7	46	27	-	1	1	-	-	1	-	1	-	5	2	12	1	14	25	14	6
Thornton	19	6	1	7	35	28	-	-	1	-	-	4	-	-	-	-	1	1	-	9	21	12	1
Thurlstone	14	8	2	6	13	17	-	-	1	-	-	-	-	-	-	-	3	-	-	4	12	9	2
Thurstonland ..	-	-	1	-	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-
Tickhill	8	3	-		5	10	-	-	-	-	-	-	-	-	-	1	-	1	-	4	4	1	-
Todmorden Borough ..	96	39	17	17	217	119	-	2	1	-	-	11	-	-	1	13	10	10	3	34	112	48	14
Tong	38	16	12	6	34	19	-	2	1	-	-	1	-	-	-	4	3	2	1	10	28	1	-
Uppermill	6	2	2	1	9	6	-	-	-	-	-	2	-	-	-	-	-	2	-	2	5	1	-
Wakefield City ..	184	104	24	44	316	167	-	6	2	-	-	8	-	1	1	12	21	38	-	103	166	63	35
Warley	6	5	3	3	5	11	-	1	1	-	-	-	-	-	-	1	-	-	-	3	7	3	1
Wath	65	24	3	4	31	16	-	2	2	1	-	5	-	-	-	3	5	19	-	2	23	5	5
Whitley Upper ..	2	-	-	2	3	2	-	-	-	-	-	1	-	-	-	-	-	1	-	1	-	1	1
Whitwood	51	23	5	3	24	6	-	4	-	-	-	1	-	1	-	-	7	9	3	7	20	3	3
Wilsden	8	3	3	3	14	10	-	1	1	-	-	1	-	-	-	-	1	-	-	3	10	5	1
Wombwell	96	41	9	4	35	19	-	3	-	1	-	7	-	-	1	5	10	27	-	17	33	12	3
Worsborough ..	79	31	10	10	36	24	-	-	-	2	-	2	-	-	-	10	1	13	-	17	35	16	7
Yeadon	19	17	6	7	30	24	-	-	2	-	-	1	-	-	-	-	2	1	-	6	19	5	1
Total of Urban Districts ..	5507	2601	794	926	5715	4245	-	181	128	83	-	286	4	30	28	494	349	1024	62	1532	3691	1563	512
II. RURAL.																							
Barnsley	41	17	6	6	30	10	-	1	-	-	-	-	-	2	1	1	-	7	-	6	20	6	7
Bishopthorpe ..	8	-	1	-	12	12	-	-	-	-	-	-	-	-	-	-	-	-	-	1	4	6	4
Bowland	5	3	-	5	22	26	-	-	-	-	-	-	-	-	-	-	-	-	-	3	12	6	4
Doncaster	195	65	15	19	97	84	-	3	-	1	-	9	-	-	-	10	12	39	-	33	80	30	6
Goole	42	15	5	3	28	32	-	3	2	1	-	1	-	1	-	2	3	6	-	7	24	11	-
Great Ouseburn ..	28	16	5	4	37	68	-	2	-	-	-	-	-	1	-	5	-	4	-	9	19	12	3
Halifax	31	18	10	11	33	31	-	4	-	-	-	3	-	1	-	2	2	9	1	15	27	6	2
Hemsworth	138	83	14	14	78	47	-	5	1	1	-	7	-	1	1	23	3	47	-	13	06	18	9
Hunslet	29	10	5	4	31	32	-	-	3	-	-	1	-	-	-	1	-	8	1	5	20	11	6
Keighley	14	12	4	12	24	27	-	2	10	-	-	17	-	-	1	-	1	1	-	4	21	7	2
Kiveton Park ..	29	12	3	5	25	19	-	-	1	-	-	3	-	-	-	2	-	5	-	9	17	6	-
Knaresborough ..	65	13	6	8	45	58	-	-	1	1	-	-	-	-	-	1	5	16	-	18	32	15	4
Leeds	5	3	7	5	9	3	2	4	3	-	-	-	-	-	-	-	-	-	-	3	4	3	-
Pateley Bridge ..	30	5	8	14	49	56	-	-	-	-	-	1	-	-	-	-	-	-	-	9	31	25	4
Penistone	23	14	-	4	29	32	-	-	2	-	-	1	-	-	2	2	-	5	1	8	24	15	-
Pontefract	70	32	8	8	39	50	-	-	2	-	-	1	-	-	1	-	1	12	-	10	44	16	11
Ripon	6	4	-	-	18	43	-	-	-	-	-	-	-	-	-	-	3	-	-	3	6	5	2
Rotherham	108	30	17	14	68	50	-	5	2	-	-	8	-	-	-	-	-	29	1	14	56	17	11
Saddleworth	32	17	4	8	79	57	-	-	-	-	-	1	-	-	-	3	1	2	-	15	27	28	12
Sedbergh	3	6	1	-	14	28	-	-	-	1	-	-	-	-	-	1	4	1	-	4	4	8	3
Selby	24	8	1	3	15	29	-	-	-	-	-	-	-	-	-	-	4	4	-	3	11	9	6
Settle	43	21	5	9	50	102	-	-	-	2	-	4	-	-	1	6	-	3	-	15	37	25	7
Skipton	68	27	14	18	76	137	-	-	-	-	-	1		1	1	2	-	7	4	28	69	53	15
Tadcaster	143	60	24	20	118	127	-	6	1	-	-	1	-	-	-	4	16	20	4	23	82	33	12
Thorne	18	10	5	3	30	59	-	-	-	-	-	-	-	-	-	-	1	4	1	7	23	10	5
Todmorden	15	4	4	4	29	29	-	-	-	-	-	1	-	-	-	-	-	-	-	6	13	7	5
Wakefield	211	98	19	31	107	69	-	6	2	4	-	7	-	1	-	33	20	46	2	33	106	34	12
Wetherby	44	12	14	16	82	84	-	2	-	-	-	1	-	1	1	1	2	13	3	20	36	23	11
Wharfedale N. Div. ..	5	2	1	1	23	28	-	-	-	-	-	-	-	-	-	-	1	-	-	4	14	9	1
Do. S. Div. ..	10	3	-	5	155	47	-	-	-	-	-	1	-	-	2	-	-	1	1	21	25	38	2
Wortley 1st Div. ..	121	40	24	15	82	58	-	9	6	4	-	6	-	-	-	5	5	31	5	22	52	29	8
Do. 2nd Div. ..	72	20	3	22	159	136	-	2	2	-	-	1	-	-	2	2	-	10	1	41	87	33	2
Do. 3rd Div. ..	18	5	4	2	30	7	-	-	-	1	-	-	-	-	-	1	-	1	-	7	16	11	2
Total of Rural Districts ..	1694	685	237	293	1723	1677	2	54	38	16	-	76	-	9	13	107	84	331	25	419	1139	565	178
Administrative County ..	7201	3286	1031	1219	7438	5922	2	235	166	99	-	362	4	39	41	601	433	1355	87	1951	4830	2128	690
Column	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

Dodworth	20	4	1	5	12	11	-	1	-	-	-	1	-	-	-	-	-	5	1	3	3	4	3
Doncaster Borough	185	67	19	30	149	124	-	1	2	1	-	6	-	-	2	21	11	27	-	63	72	43	15
Drighlington	25	9	1	5	28	12	-	-	-	-	-	-	-	-	2	4	-	-	-	7	20	8	-
Eccleshill	28	13	3	4	34	38	-	-	-	-	-	1	-	-	-	5	1	2	-	8	16	12	3
Elland	43	16	2	5	42	36	-	-	-	-	-	1	-	-	-	1	1	6	1	15	26	5	-
Emley	8	5	2	-	4	4	-	1	-	-	-	-	-	1	-	-	3	-	-	-	8	-	-
Farnley Tyas	1	1	-	-	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-
Farsley	12	8	2	6	31	27	-	1	2	1	-	-	-	-	-	1	-	7	-	6	20	17	1
Featherstone..	109	55	6	10	38	15	-	-	2	-	-	3	-	1	-	15	4	1	-	10	35	11	8
Flockton	5	3	2	1	2	5	-	1	1	-	-	-	-	-	-	-	-	1	-	1	3	1	-
Gildersome	16	10	6	2	14	14	-	-	1	-	-	1	-	-	-	3	-	3	-	4	11	4	2
Golcar	30	16	3	7	42	36	-	-	-	-	-	1	-	1	-	3	-	1	-	9	17	11	5
Gomersal	22	6	6	6	25	19	-	-	1	1	-	3	-	-	-	-	-	4	-	3	17	13	-
Goole	98	39	19	14	82	48	-	3	2	4	-	4	-	1	-	4	2	17	-	19	66	19	9
Greasborough	10	5	4	1	20	14	-	-	-	2	-	1	-	-	-	-	-	3	-	5	12	-	-
Greetland	10	3	2	-	26	22	-	-	-	-	-	1	-	-	-	1	1	1	1	5	11	4	-
Guiseley	23	16	-	2	19	19	-	-	-	2	-	-	-	-	-	-	6	2	-	4	16	7	3
Gunthwaite	-	-	-	1	1	3	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	1	-
Handsworth	95	56	6	8	49	22	-	1	2	1	-	2	-	-	-	12	13	33	-	12	39	11	5
Harrogate Borough	58	18	5	18	101	90	-	-	2	-	-	2	-	2	2	-	6	20	-	17	36	39	8
Haworth	30	5	7	5	38	29	-	-	1	1	-	-	-	-	-	-	-	1	-	16	22	13	6
Hebden Bridge	22	5	7	4	37	25	-	-	1	-	-	2	1	-	1	-	-	-	1	6	26	8	1
Heckmondwike	65	33	9	8	58	32	-	-	-	-	-	4	-	-	-	18	9	9	-	15	42	10	1
Hipperholme	10	2	1	1	22	12	-	-	-	-	-	4	-	-	-	-	-	2	-	5	6	9	1
Holme	1	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
Holmfirth	25	13	-	4	42	38	-	-	-	-	-	1	-	-	-	3	4	3	-	14	24	11	7
Honley	14	7	1	7	44	53	-	-	1	-	-	-	-	-	-	-	-	-	1	8	19	13	3
Horbury	45	17	5	5	37	23	-	1	-	2	-	1	-	-	-	5	5	8	-	9	21	7	12
Horsforth	26	20	9	8	39	32	-	6	8	4	-	1	-	-	-	3	7	5	1	16	22	11	1
Hoyland Nether	76	34	6	8	38	30	-	5	-	3	-	5	-	-	-	5	1	15	1	8	37	5	8
Hoylandswaine	1	1	-	-	7	2	-	-	-	-	-	1	-	-	-	-	-	1	-	1	2	-	1
Hunsworth	1	4	-	1	7	4	-	-	-	-	-	1	-	-	-	1	-	1	-	2	3	-	-
Idle	20	11	5	5	40	35	-	-	-	-	-	-	-	-	-	-	4	6	2	12	29	11	5
Ilkley	14	8	-	7	22	41	-	-	-	-	-	-	-	-	-	-	1	-	-	13	19	6	1
Keighley Borough	205	74	35	38	253	134	-	3	28	4	-	4	-	-	-	4	3	21	2	66	182	54	10
Kirkburton	12	4	-	1	21	20	-	-	-	1	-	-	-	-	-	-	-	1	-	12	18	3	-
Kirkheaton	2	2	3	2	13	13	-	1	-	-	-	-	-	-	-	-	-	-	-	5	8	4	-
Knaresborough	35	18	6	7	33	52	-	1	1	6	-	-	-	-	-	1	1	5	1	15	14	12	4
Knottingley	44	19	9	1	12	21	-	4	-	-	-	1	-	-	-	6	2	2	-	7	24	8	5
Lepton	4	3	4	1	11	20	-	1	-	-	-	-	-	-	-	-	-	-	-	1	10	3	1
Linthwaite	22	11	-	11	29	19	-	-	-	-	-	1	-	1	-	4	-	3	2	13	13	8	1

TABLE III.—Notification, Isolation, Adoptive Acts, Etc.

SANITARY DISTRICT.	Isolation Hospital (other than Workhouse) *at middle of 1899.*	ADOPTIVE ACTS. INFECTIOUS DISEASES. Notification Act.	Prevention Act.	Public Health Acts Amendment Act.	Public Scavenging.	CASES NOTIFIED OR OTHERWISE ASCERTAINED. Small Pox	Scarlet Fever	Diphtheria	Croup	FEVERS. Typhus	Enteric	Continued	Puerperal	Erysipelas	Measles	Whooping Cough	CASES REMOVED TO HOSPITAL. Small Pox	Scarlet Fever	Diphtheria	Enteric Fever
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
I. URBAN.																				
Altofts	[Normanton Jt.] ..	1892 (*a*)	—	×	—	–	28	2	–	–	2	–	1	5	5	–	–	–	–	–
Ardsley	Kendray Jt. ..	1892 ..	×	×	yes	–	20	–	–	–	10	–	–	3	*	*	–	14	–	–
Ardsley East & West *m*	Carr Gate Jt. ..	1896 ..	—	—	yes	–	154	1	–	–	7	–	–	4	*	*	–	59	–	1
Baildon	[Wharfedale Jt.] ..	1891 ..	—	×	yes	–	17	3	–	–	3	2	1	6	*	*	–	1	–	–
Balby-with-Hexth. *x*	*Balby*	1896 ..	—	—	yes	–	8	1	2	–	3	–	–	5	E	–	–	4	–	3
Barkisland	*Holling Hey Jt.* ..	1889 ..	—	—	—	–	6	2	–	–	1	–	–	1	E	*	–	–	–	–
Barnoldswick	*Shed*	1895 ..	×	×	yes	–	125	–	–	–	3	–	–	–	E	*	–	–	–	–
Barnsley Borough ..	Kendray Jt. ..	1890 ..	×	×	yes	–	99	15	3	–	133	1	2	33	*	*	–	86	–	57
Batley Borough ..	*Howden Clough* ..	1890 ..	×	×	yes	1	146	21	3	–	110	11	1	33	*	*	1	–	–	–
Bingley	Morton Jt. ..	1890 ..	×	×	yes	–	17	–	2	–	1	–	–	9	–	–	–	–	–	–
Bingley Outer ..	Morton Jt. ..	1892 ..	×	×	part	–	14	–	1	–	4	–	–	3	–	–	–	13	–	3
Birkenshaw	[Oakwell Jt.] ..	1893 ..	×	×	—	–	5	–	–	–	–	–	1	3	–	*	–	–	–	–
Birstal *m*	[Oakwell Jt.] ..	1892 ..	—	×	yes	–	62	4	33	–	10	–	–	14	–	*	–	–	–	–
Brighouse	Clifton Jt. ..	1890 ..	×	×	yes	–	87	5	2	–	21	1	1	32	*	*	–	49	2	7
Burley-in-Wharfedale	[Wharfedale Jt.] ..	1893 ..	×	×	yes	–	1	–	–	–	4	3	–	1	–	*	–	–	–	–
Calverley	Calverley Jt. ..	1892 ..	—	—	yes	–	1	–	–	–	2	–	–	3	–	–	–	–	–	1
Castleford	[Normanton Jt.] ..	1890 ..	×	—	yes	–	18	1	–	–	21	–	1	5	*	*	–	1	–	3
Clayton	Thornton Jt. ..	1890 ..	—	—	yes	–	1	2	–	–	3	2	–	1	–	*	–	–	–	–
Clayton West	[Penistone Jt.] ..	—	—	—	yes	–	–	–	1	–	1	–	–	–	–	–	–	–	–	–
Cleckheaton	North Bierley Jt.	1890 ..	×	×	yes	–	32	4	–	–	18	–	–	13	*	*	–	23	–	11
Darfield	Kendray Jt. ..	1896 ..	—	—	yes	–	49	–	–	–	5	–	–	4	*	E	–	48	–	–
Darton	Kendray Jt. ..	1890 ..	—	—	yes	–	54	4	–	–	40	–	–	6	*	*	–	–	–	13
Denby & Cumberworth	[Penistone Jt.] ..	1899 ..	—	—	yes	–	–	–	–	–	–	–	–	–	–	*	–	–	–	–
Denholme	Shipley	1896 ..	—	×	yes	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–
Dewsbury Borough *x*	[Dewsbury Jt.] ..	1884 ..	—	—	yes	–	162	5	–	–	32	2	1	22	*	*	–	–	–	–
Dodworth	Kendray Jt. ..	1890 ..	×	—	yes	–	7	6	–	–	4	–	–	5	–	–	–	5	–	–
Doncaster Borough *x*	*Carr House* ..	1893 ..	×	×	yes	1	33	10	1	–	37	–	–	33	P	*	1	18	1	20
Drighlington	[Oakwell Jt.] ..	1895 ..	—	—	yes	–	–	–	–	–	1	–	–	8	E	–	–	–	–	–
Eccleshill	Calverley Jt. ..	1891 (*all*)	×	—	yes	–	6	–	–	–	9	–	1	10	E	*	–	–	–	–
Elland	*Holling Hey Jt.* ..	1892 ..	×	×	yes	–	6	–	1	–	11	–	–	10	*	*	–	–	–	–
Emley *m*	—	—	—	—	yes	–	4	–	–	–	3	–	1	–	–	*	–	–	–	–
Farnley Tyas *m* ..	—	1899	—	—	—	–	–	–	–	–	–	–	–	–	–	P	–	–	–	–
Farsley	Calverley Jt. ..	1898 ..	—	—	yes	–	4	3	1	–	10	–	–	–	*	–	–	4	–	3
Featherstone *x* ..	[Normanton Jt.] ..	1890 (*a*) (*c*)	×	×	yes	1	57	12	–	–	40	–	2	13	E	*	1	–	–	–
Flockton ..	—	1896 ..	—	—	—	–	16	1	–	–	–	–	–	1	–	–	–	–	–	–
Gildersome *m* ..	—	1894 ..	—	—	—	–	8	1	–	–	5	–	2	3	E	–	–	–	–	–
Golcar	*Moor Top Jt.*	1896 ..	—	—	yes	–	6	–	–	–	14	1	2	–	E	–	–	–	–	–
Gomersal *m*	[Oakwell Jt.] ..	—	—	—	yes	–	–	–	–	–	2	–	–	–	–	–	–	–	–	–
Goole *x*	Goole Jt. ..	1889 ..	×	×	yes	14	51	9	5	–	22	–	1	34	*	*	12	22	1	11
Greasborough ..	[Wath, etc. Jt.]	1892 ..	×	×	yes	–	10	–	–	–	3	–	–	1	–	–	–	–	–	–
Greetland *m*	*Cottages* ..	1890 ..	—	—	yes	–	15	1	–	–	6	–	–	7	*	*	–	–	–	–
Guiseley *m*	[Wharfedale Jt.] ..	—	—	—	yes	–	–	–	2	–	1	–	–	–	–	*	–	–	–	–
Gunthwaite *m* ..	[Penistone Jt.] ..	1899	—	—	yes	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Handsworth	[Handsworth, etc. Jt	1891 ..	—	×	yes	–	33	3	1	–	18	–	–	8	E	E	–	–	–	–
Harrogate Borough *m*	[Harrogate, etc. Jt.]	1896 ..	×	×	yes	–	17	3	–	–	9	–	2	2	–	P	–	2	–	–
Haworth	Morton Jt. ..	1890 ..	—	×	yes	–	25	6	–	–	2	4	1	10	–	–	–	17	2	1
Hebden Bridge ..	Fielden & *Sourhall*	1890 ..	×	×	yes	–	24	4	–	–	8	1	–	7	–	–	–	19	–	6
Heckmondwike ..	[Dewsbury Jt.] ..	1891 ..	—	—	yes	–	23	1	1	–	25	–	–	9	*	*	–	–	–	–
Hipperholme	*Clifton Jt.* ..	1890 ..	—	—	yes	–	5	–	–	–	7	1	–	4	P	–	–	–	–	1
Holme *m*	—	1896 ..	—	—	part	–	–	–	–	–	2	–	–	–	–	–	–	–	–	–
Holmfirth	—	1899 ..	—	×	yes	–	–	–	–	–	6	–	–	–	E	E	–	–	–	–
Honley	—	1895 ..	—	×	yes	–	17	8	–	–	2	–	–	2	E	–	–	–	–	–
Horbury	—	1892 ..	×	—	yes	–	99	–	3	–	6	–	–	13	E	P	–	–	–	–
Horsforth	[Wharfedale Jt.] ..	1897 ..	×	×	yes	–	64	45	1	–	26	6	–	9	*	*	–	–	–	3
Hoyland Nether *m x* ..	Kendray Jt. ..	1892 ..	×	—	yes	–	117	2	4	–	47	–	–	10	*	*	–	–	–	24
Hoylandswaine ..	[Penistone Jt.] ..	1897 ..	—	—	—	–	–	–	–	–	5	–	–	–	–	–	–	–	–	–
Hunsworth	North Bierley Jt.	1890 ..	×	×	—	–	6	–	–	–	–	–	–	4	*	–	–	2	–	–
Idle	Calverley Jt. ..	1891 ..	×	×	yes	–	5	1	–	–	8	–	–	1	–	*	–	5	1	6
Ilkley	[Wharf. Jt.] & *Ilkley*	1890 (*a*) (*b*)	×	×	yes	–	–	4	–	–	2	–	–	4	185	5	–	–	–	–
Keighley Borough ..	Morton Jt. ..	1890 ..	×	×	yes	–	72	142	7	–	73	–	2	41	*	*	–	48	64	52
Kirkburton *m* ..	—	—	—	—	—	–	2	–	1	–	3	–	–	1	–	–	–	–	–	–
Kirkheaton *m* ..	—	1893 ..	×	—	yes	–	4	1	–	–	1	–	–	–	–	–	–	–	–	–
Knaresborough ..	[Harrogate, etc. Jt.]	—	—	×	yes	–	1	13	6	–	12	–	1	–	*	*	–	–	–	–
Knottingley ..	[Pontefract Jt.] ..	1896 ..	—	—	yes	–	24	–	–	–	5	–	–	6	*	*	–	–	–	–
Lepton *m*	—	1899	—	—	yes	–	2	–	–	–	–	–	–	–	–	–	–	2	–	–
Linthwaite	*Moor Top Jt.* ..	1893 *a,b,f,g*	—	×	yes	–	9	–	–	–	8	–	–	2	E	–	–	–	–	–
Liversedge	*Mirfield Jt.* ..	1891 ..	—	×	yes	–	13	4	–	–	84	–	3	31	*	*	–	5	–	–
Luddendenfoot ..	*Moor Bottom Jt.*	1893 ..	×	—	yes	–	2	1	1	–	3	–	–	3	*	–	–	–	–	1
Marsden	*Moor Top Jt.* ..	1895 ..	—	—	yes	–	–	1	–	–	2	–	–	4	*	–	–	–	–	–
Meltham	—	1896 ..	×	—	yes	–	9	–	–	–	3	–	–	6	P	–	–	–	–	–
Methley *m*	*Methley*	1891 ..	—	—	—	–	1	–	–	–	1	–	1	4	–	–	–	–	–	1
Mexborough *x* ..	*Mexborough* ..	1890 (*a*)	—	—	yes	–	122	10	–	–	25	–	–	6	*	*	–	–	–	–
Midgley *m*	*Moor Bottom Jt.*	1890 ..	×	—	—	–	3	–	–	–	2	–	–	1	–	–	–	–	–	–
Mirfield *x*	*Mirfield Jt.* ..	1890 ..	×	×	yes	–	74	8	1	–	6	–	1	15	E	*	–	68	–	–
Monk Bretton ..	Kendray Jt. ..	1890 ..	×	—	yes	–	5	–	–	–	6	–	–	1	*	–	–	–	–	5
Morley Borough ..	Morley ..	1899	—	—	yes	–	86	5	–	–	33	–	–	–	P	*	–	8	–	–
Mytholmroyd	Fielden & *Sourhall*	1892 ..	×	×	yes	–	1	–	–	–	12	–	–	3	–	–	–	1	–	11
Netherthong	—	1896 ..	—	—	—	–	3	–	–	–	1	–	–	1	E	–	–	–	–	–
New Mill	—	1896 ..	—	—	yes	–	–	1	3	–	–	–	–	2	–	*	–	–	–	–
Normanton	[Normanton Jt.] ..	1890 ..	×	×	yes	–	43	6	–	–	17	–	–	16	–	–	–	–	–	–
North Bierley	North Bierley Jt.	1890 ..	×	×	yes	–	63	7	1	–	50	–	2	17	*	*	–	55	–	28
Northowram *m* ..	—	1890 ..	—	—	—	–	12	–	1	–	2	–	–	–	E	*	–	–	–	–
Oakworth	Morton Jt. ..	1890 ..	—	×	part	–	1	–	–	–	13	5	–	10	–	*	–	1	–	10
Ossett Borough ..	Ossett	1890 ..	×	×	yes	–	45	2	11	–	11	–	2	26	*	–	–	–	–	–
Otley	[Wharf. Jt.] & *Otley*	1891 ..	×	×	yes	–	7	20	–	–	8	–	–	12	–	*	–	3	10	5
Oxenhope	Morton Jt. ..	1893 ..	—	×	part	–	4	2	1	–	–	5	1	2	–	–	–	–	–	–
Penistone	[Penistone Jt.] ..	1891 ..	—	×	yes	–	5	9	–	–	7	–	–	–	–	P	–	–	–	–
Pontefract Borough ..	Pontefract Jt. ..	1890 (*a*) (*c*)	×	×	yes	–	21	3	–	–	7	–	2	5	*	–	–	–	–	–
Pudsey	Calverley Jt. ..	1895 ..	—	×	yes	–	57	21	3	–	54	–	1	20	E	–	–	48	14	23
Queensbury	*Queensbury* ..	1892 ..	—	—	—	–	19	1	–	–	3	–	1	7	E	E	–	16	–	–
Ravensthorpe *m* ..	[Dewsbury Jt.] ..	1890 ..	×	×	yes	–	31	–	1	–	4	–	–	6	*	*	–	–	–	–
Rawdon	[Wharfedale Jt.] ..	1891 (*a*)	×	×	yes	–	1	5	–	–	4	–	–	–	*	–	–	–	–	–
Rawmarsh	Rawmarsh ..	Voluntary .	—	×	yes	–	150	7	–	–	15	–	–	–	*	*	–	41	1	–
Ripon City	Ripon Jt. ..	1886 ..	×	×	yes	–	–	–	–	–	3	–	–	–	–	*	–	–	–	1
Rishworth	*Holling Hey Jt.*	1890 ..	×	×	—	–	16	1	–	–	1	–	–	2	–	–	–	–	–	–
Rotherham Borough ..	*Rotherham* ..	1879 ..	×	×	yes	–	219	9	6	–	60	–	–	–	*	*	–	–	–	–
Rothwell	*Cottage*	1890 ..	×	×	yes	–	59	2	1	–	5	–	–	3	E	*	–	–	–	–
Roystone	Kendray Jt. ..	1896 ..	×	×	yes	–	–	–	–	–	–	–	–	–	*	–	–	–	–	–
Sandal Magna ..	*Sandal*	1890 ..	—	×	yes	–	34	1	–	–	9	–	–	2	E	*	–	4	–	–
Scammonden	—	1897 ..	—	—	—	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–
Selby *x*	[Selby Jt.] ..	1889 ..	×	×	yes	–	4	–	–	–	1	–	–	2	–	*	–	–	–	–
Shelf	—	1896 ..	—	×	part	–	1	–	–	–	2	–	1	1	47	*	–	–	–	–
Shelley	—	—	—	—	—	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Shepley	—	—	—	—	part	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Shipley	Stoney Ridge	1890 ..	—	×	yes	–	131	3	3	–	20	2	–	10	P	*	–	57	–	8
Silsden	[Skipton Jt.] ..	1894 ..	—	×	yes	–	2	5	5	–	12	–	–	6	–	–	–	–	–	–
Skelmanthorpe ..	—	—	—	—	yes	–	4	–	–	–	4	–	–	1	–	–	–	–	–	–
Skipton	*Skipton*	1890 ..	—	×	yes	–	2	–	–	–	8	–	–	10	*	*	–	2	–	–
Slaithwaite ..	—	1896 ..	—	—	yes	–	14	–	–	–	8	–	–	1	–	–	–	–	–	–
Soothill Nether ..	[Dewsbury Jt.] ..	1890 ..	×	×	yes	–	50	1	–	–	3	–	1	9	*	*	–	–	–	–
Soothill Upper ..	[Dewsbury Jt.] ..	1891 ..	—	×	yes	–	66	5	1	–	17	1	1	5	*	–	–	–	–	–
South Crosland ..	—	1891 ..	—	—	yes	–	2	–	–	–	1	–	–	–	*	–	–	–	–	
Southowram	Clifton Jt. ..	1890 ..	×	×	—	–	15	–	–	–	3	–	–	1	*	*	–	12	–	1
Sowerby	*Cottage*	1898	×	—	—	–	3	1	–	–	1	–	–	2	–	–	–	–	–	–
Sowerby Bridge ..	*Cottage*	1890 ..	×	×	yes	–	67	11	–	–	16	–	–	13	–	*	–	2	–	5
Soyland	*Holling Hey Jt.*	1889 ..	—	—	—	–	17	5	1	–	–	–	–	–	E	–	–	–	–	–
Springhead ..	—	1891 ..	×	—	yes	–	1	–	–	–	–	–	2	1	*	*	–	–	–	–
Stainland	*Holling Hey Jt.*	1889 ..	—	×	yes	–	5	1	2	–	4	–	–	3	P	*	–	–	–	1
Stocksbridge	*Stocksbridge* ..	1890 ..	—	—	yes	–	28	2	1	–	17	–	–	10	–	–	–	10	–	2
Swinton	[Wath, etc. Jt.]	1891 ..	×	×	yes	–	76	5	–	–	48	–	4	9	*	*	–	–	–	–
Thornhill *m*	*Thornhill* ..	—	—	×	yes	1	P	*	–	–	*	–	*	–	P	*	1	–	–	–
Thornton	Thornton Jt. ..	1891 ..	×	×	yes	–	1	2	–	–	14	–	–	4	–	*	–	1	2	9
Thurlstone	[Penistone Jt.] ..	1890 ..	×	×	part	–	–	4	–	–	5	–	–	–	–	*	–	–	–	–
Thurstonland *m* ..	—	—	—	—	—	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Tickhill *x*	—	1890 ..	—	—	—	–	–	–	–	–	–	–	–	–	P	–	–	–	–	–
Todmorden Borough ..	Fielden & *Sourhall*	1891 ..	×	×	yes	–	22	3	–	–	41	–	–	18	P	P	–	8	–	20
Tong	North Bierley Jt.	1890 ..	×	×	yes	–	79	1	8	–	4	–	1	16	*	*	–	43	–	3
Uppermill	*Cottage*	1890 ..	—	×	—	–	–	–	–	–	6	–	–	–	–	–	–	–	–	–
Wakefield City *x* ..	Wakefield ..	1887 ..	—	×	yes	–	155	17	–	–	62	–	3	–	*	*	–	50	–	–
Warley *m*	[*Moor Bottom Jt.*]	1889 ..	×	—	—	–	12	2	–	–	4	–	–	1	*	–	–	4	–	2
Wath	[Wath, etc. Jt.] ..	1891 ..	×	×	yes	–	122	14	1	–	45	–	1	9	*	E	–	–	–	2
Whitley Upper *m* ..	—	—	—	—	—	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–
Whitwood	[Normanton Jt.] ..	1895 ..	—	—	yes	–	29	2	–	–	2	–	–	2	P	P	–	2	–	–
Wilsden	Thornton Jt. ..	1896 ..	×	×	yes	–	38	4	1	–	6	8	–	6	–	*	–	4	–	–
Wombwell	Kendray Jt. ..	1889 ..	×	×	yes	–	35	1	1	–	24	–	–	8	*	*	–	32	–	15
Worsborough	Kendray Jt. ..	1890 ..	×	×	yes	–	6	1	2	–	11	–	2	15	*	*	–	2	–	5
Yeadon	[Wharfedale Jt.] ..	1892 ..	×	×	yes	–	5	1	–	–	9	–	–	3		*	–	–	–	–
Total of Urban Districts ..						18	3981	563	137	–	1726	56	54	835	?	?	16	921	98	384
II. RURAL.																				
Barnsley ..	Kendray Jt.	1890 ..	×	×	part	–	13	1	–	–	7	–	–	4	*	–	–	3	–	5
Bishopthorpe *m* ..	—	1890 ..	—	—	—	–	5	1	–	–	1	–	–	–	–	–	–	1	–	–
Bowland ..	—	1890 ..	×	×		–	11	–	–	–	3	–	–	2	–	–	–	–	–	–
Doncaster *x* ..	*Balby* ..	1890 ..	×	×	part	–	154	3	1	–	61	–	3	10	*	*	–	83	–	19
Goole *x*	Goole Jt. ..	1889	—	—	part	–	10	3	1	–	7	–	2	4	*	*	–	–	1	2
Great Ouseburn ..	—	1890 ..	—	—	part	–	27	4	–	–	4	–	–	3	E	–	–	–	–	–
Halifax	Clifton Jt. ..	1890 ..	×	×	part	–	34	–	–	–	7	–	1	11	*	*	–	5	–	2
Hemsworth	Brierley Common	1890 ..	—	×	part	–	281	1	2	–	34	–	1	5	P	P	–	250	–	23
Hunslet	*Cottage*	1890 ..	—	—	yes	–	7	6	–	–	7	–	–	4	E	P	–	–	–	–
Keighley	Morton Jt. ..	1890 ..	×	—		–	–	1	–	–	7	–	–	1	–	*	–	–	1	4
Kiveton Park	[Handsworth, etc. Jt	1890 ..	×	×	part	–	22	3	–	–	7	–	–	3	*	–	–	–	–	–
Knaresborough ..	[Harrogate, etc. Jt.]	1896	—	×	part	–	12	1	–	–	2	–	–	–	*	*	–	–	–	–
Leeds *m*	..	1891 ..	—	—	yes	–	7	3	–	–	1	–	–	1	–	–	–	–	–	–
Pateley Bridge ..	..	1889 (*a*)	—	—		–	3	1	–	–	1	–	–	5	48	E	–	–	–	–
Penistone	[Penistone, Jt.] ..	1890 ..	—	—	—	–	3	3	–	–	5	–	–	3	*		–	–	–	–
Pontefract	[Pontefract Jt.] ..	1894 ..			part	1	22	3	–	–	7	–	–	3	64	*			–	–
Ripon	Ripon Jt. ..	1890 ..			—	–	12	–	–	–	1	–	–	3	–	*			–	–
Rotherham *m*	Wath Jt. & Handsth Jt.	1895 ..	×	—	part	–	145	6	–	–	50	–	1	11	E				–	24
Saddleworth	*Cottage*	1890 ..			—	–	15	2	1	–	15	1	–	11	*				–	–
Sedbergh	*Sedbergh*	1890 ..			×	–	9	–	–	–	–	–	–	3	*	*			–	–
Selby *x*	[Selby Jt.] ..	1889 ..	×	×	—	–	6	–	–	–	6	–	–	–	P	*			–	–
Settle	Giggleswick ..	1890 ..			×	part	–	10	–	2	–	10	–	–	20	*				–
Skipton	*Skipton Jt.* ..	1890 ..			×	part	–	56	5	–	–	12	–	1	8	*			39	–	2
Tadcaster *x* ..	*Tadcaster* ..	1889 ..			—	part	–	220	13	–		29	1	1	18	*	*		58	–	10
Thorne *x*	*Belton*	1891 ..	×	×	—		–	37	2	–		1	–		2	–	*	–	7	–	
Todmorden	Fielden & *Sourhall*	1890 ..	×	×		part	–	4		–		6	–		2	–	–	–	4	–	3
Wakefield	Carr Gate ..	1890 ..	×	×		part	–	128	10	2		28	–	3	27	*	*	–	58	1	3
Wetherby	Sicklinghall ..	1889 ..	×	—		part	–	111	3	–	–	4	–	2	3	*	*	–	40	–	–
Wharfedale, N. *m* ..	[Wharfedale Jt.] ..	1894 ..	—	—		—	–	4		–	–	1	–		3		*	–	–	–	–
Do. S. *m* ..	[Wharfedale Jt.] ..	1894 ..	—	—		—	–	6	1	–	–	2	–	1	6	–	–	–	–	–	–
Wortley 1st Div.	Grenoside ..	1889 ..	—	—		part	–	244	5	7	–	29	–	–	9	E	*	–	163	–	–
,, 2nd Div. *m* ..	Grenoside ..	1889 ..	—	—		part	–	68	6	–	–	8	–	1	7	*	–	–	47	–	–
,, 3rd Div. ..	Grenoside ..	1889 ..	—	—		part	–	2	–	1	–	–	–	–	–	E	–	–	2	–	–
Totals of Rural Districts ..							1	1694	87	17	–	363	2	17	201	?	?	–	760	3	97
Grand Totals for the Administrative County ..							19	5675	650	154	–	2089	58	71	1036	?	?	16	1681	101	481

(*a*), (*b*), (*c*), (*d*), (*e*), (*f*), (*g*) Diseases added to Notification Schedule: *a* measles, *b* whooping cough, *c* German measles, *d* chicken pox, *e* mumps, *f* diarrhœa, *g* rheumatic fever, *h* phthisis.

(*x*) Table C not furnished. (*m*) Report not printed. E Epidemic recorded. P Prevalence recorded.

* (Cols. 16 and 17) Cases have occurred.

In Column 2 brackets indicate that the hospital is not yet erected; and *italics* signify that the hospital is not a permanent building erected for the purpose.

In Columns 4 and 5 a cross × indicates that the Act has been adopted.

Doncaster Borough *x*	*Carr House* ..	1893 ..	×	×	yes	1	33	10	1	1	37	–	–	55	E	*	1	18	1	20
Drighlington	[Oakwell Jt.] ..	1895 ..	—	—	yes	–	–	–	–	–	1	–	–	8	E	–	–	–	–	–
Eccleshill	Calverley Jt. ..	1891 (*all*)	×	—	yes	–	6	–	–	–	9	–	1	10	E	*	–	–	–	–
Elland	*Holling Hey Jt.* ..	1892 ..	×	×	yes	–	6	–	1	–	11	–	–	10	*	*	–	–	–	–
Emley *m*	—	—	—	—	yes	–	4	–	–	–	3	–	1	–	–	*	–	–	–	–
Farnley Tyas *m* ..	—	1899	—	—	—	–	–	–	–	–	–	–	–	–	–	P	–	–	–	–
Farsley	Calverley Jt. ..	1898 ..	—	—	yes	–	4	3	1	–	10	–	–	–	*	–	–	4	–	3
Featherstone *x* ..	[Normanton Jt.] ..	1890 (*a*) (*c*)	×	×	yes	1	57	12	–	–	40	–	2	13	E	*	1	–	–	–
Flockton ..	—	1896 ..	—	—	—	–	16	1	–	–	–	–	–	1	–	–	–	–	–	–
Gildersome *m* ..	—	1894 ..	—	—	—	–	8	1	–	–	5	–	2	3	E	–	–	–	–	–
Golcar	*Moor Top Jt.* ..	1896 ..	—	—	yes	–	6	–	–	–	14	1	2	–	E	–	–	–	–	–
Gomersal *m*	[Oakwell Jt.] ..	—	—	—	yes	–	–	–	–	–	2	–	–	–	–	–	–	–	–	–
Goole *x*	Goole Jt.	1889 ..	×	×	yes	14	51	9	5	–	22	–	1	34	*	*	12	22	1	11
Greasborough ..	[Wath, etc. Jt.]	1892 ..	×	×	yes	–	10	–	–	–	3	–	–	1	–	–	–	–	–	–
Greetland *m*	*Cottages* ..	1890 ..	—	—	yes	–	15	1	–	–	6	–	–	7	*	*	–	–	–	–
Guiseley *m*	[Wharfedale Jt.] ..	—	—	—	yes	–	–	–	2	–	1	–	–	–	–	*	–	–	–	–
Gunthwaite *m* ..	[Penistone Jt.] ..	1899	—	—	yes	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Handsworth	[Handsworth, etc. Jt	1891 ..	—	×	yes	–	33	3	1	–	18	–	–	8	E	E	–	–	–	–
Harrogate Borough *m*	[Harrogate, etc. Jt.]	1896 ..	×	×	yes	–	17	3	–	–	9	–	2	2	–	P	–	2	–	–
Haworth	Morton Jt. ..	1890 ..	—	×	yes	–	25	6	–	–	2	4	1	10	–	–	–	17	2	1
Hebden Bridge ..	Fielden & *Sourhall*	1890 ..	×	×	yes	–	24	4	–	–	8	1	–	7	–	–	–	19	–	6
Heckmondwike ..	[Dewsbury Jt.] ..	1891 ..	—	—	yes	–	23	1	1	–	25	–	–	9	*	*	–	–	–	–
Hipperholme	*Clifton Jt.* ..	1890 ..	—	—	yes	–	5	–	–	–	7	1	–	4	P	–	–	–	–	1
Holme *m*	—	1896 ..	—	—	part	–	–	–	–	–	2	–	–	–	–	–	–	–	–	–
Holmfirth	—	1899 ..	—	×	yes	–	–	–	–	–	6	–	–	–	E	E	–	–	–	–
Honley	—	1895 ..	—	×	yes	–	17	8	–	–	2	–	–	2	E	–	–	–	–	–
Horbury	—	1892 ..	×	—	yes	–	99	–	3	–	6	–	–	13	E	P	–	–	–	–
Horsforth	[Wharfedale Jt.] ..	1897 ..	×	×	yes	–	64	45	1	–	26	6	–	9	*	*	–	–	–	3
Hoyland Nether *m x* ..	Kendray Jt. ..	1892 ..	×	—	yes	–	117	2	4	–	47	–	–	10	*	*	–	–	–	24
Hoylandswaine ..	[Penistone Jt.] ..	1897 ..	—	—	—	–	–	–	–	–	5	–	–	–	–	–	–	–	–	–
Hunsworth	North Bierley Jt.	1890 ..	×	×	—	–	6	–	–	–	–	–	–	4	*	–	–	2	–	–
Idle	Calverley Jt. ..	1891 ..	×	×	yes	–	5	1	–	–	8	–	–	1	–	*	–	5	1	6
Ilkley	[Wharf. Jt.] & *Ilkley*	1890 (*a*) (*b*)	×	×	yes	–	–	4	–	–	2	–	–	4	185	5	–	–	–	–
Keighley Borough ..	Morton Jt. ..	1890 ..	×	×	yes	–	72	142	7	–	73	–	2	41	*	*	–	48	64	52
Kirkburton *m* ..	—	—	—	—	—	–	2	–	1	–	3	–	–	1	–	–	–	–	–	–
Kirkheaton *m* ..	—	1893 ..	×	—	yes	–	4	1	–	–	1	–	–	–	–	–	–	–	–	–
Knaresborough ..	[Harrogate, etc. Jt.]	—	—	×	yes	–	1	13	6	–	12	–	1	–	*	*	–	–	–	–
Knottingley ..	[Pontefract Jt.] ..	1896 ..	—	—	yes	–	24	–	–	–	5	–	–	6	*	*	–	–	–	–
Lepton *m*	—	1899	—	—	yes	–	2	–	–	–	–	–	–	–	–	–	–	2	–	–
Linthwaite	*Moor Top Jt.* ..	1893 *a*,*b*,*f*,*g*	—	×	yes	–	9	–	–	–	8	–	–	2	E	–	–	–	–	–
Liversedge	*Mirfield Jt.* ..	1891 ..	—	×	yes	–	13	4	–	–	84	–	3	31	*	*	–	5	–	–
Luddendenfoot	*Moor Bottom Jt.*	1893	×	—	yes	–	2	1	1	–	3	–	–	3	*	–	–	–	–	1